CURRENT CONDITIONS REPORT

GM POWERTRAIN BEDFORD FACILITY
105 GM DRIVE
BEDFORD, INDIANA

EPA ID# IND006036099

Volume II - Appendix A through E

Prepared For:
GM/ENCORE

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MAY 25, 2001
REF. NO. 013968 (1)

MAY 25, 2001

APPENDIX A

VOLUNTARY CORRECTIVE ACTION AGREEMENT

Worldwide Facilities Group
Environmental & Regulatory Support
Remediation Team

March 20, 2001

Mr. Robert Springer, Director
Waste Pesticides and Toxics Division
Region 5 U.S. Environmental Protection Agency
77 W. Jackson Blvd (DW-8J)
Chicago, Illinois 60604-3590

RE: Return of Fully Executed Bedford Voluntary Corrective Action Agreement
Bedford, Indiana

Dear Mr. Springer:

Enclosed is one fully executed copy of the Voluntary Corrective Action Agreement (signed by U.S. EPA on March 16, 2001) for the General Motors Powertrain Bedford Plant Site (U.S. EPA ID# IND006036099), located in Bedford, Indiana. Figure 1 is being sent under separate cover. Please note that General Motors recognizes the need to protect human health and the environment and will not wait until the end of the project to address those issues. GM intends to take interim measures, where practicable, during the process to address problems as they are identified and defined.

Please call Cheryl Hiatt at 313-556-9032 or Jean Caufield at 313-556-0845 if you require any further information.

Sincerely,

William J. McFarland

William J. McFarland
Director Remediation
Worldwide Facilities Group
General Motors Corporation

Enclosure

pc: Peter Ramanauskas, U.S. EPA
Hak Cho, U.S. EPA
Gerald Phillips, U.S. EPA
Jean Caufield, GM WFG
Cheryl Hiatt, GM WFG
Michelle Fisher, GM Legal
Laura Fitzpatrick, GM Legal
Bill Schoonmaker/Kim Dobosenski, GM Bedford

485 West Milwaukee Avenue • Mail Code 482-310-004 • Detroit, MI 48202-3220 • FAX (313) 556-0803

Voluntary Corrective Action Agreement
Between
The United States Environmental Protection Agency and
General Motors Corporation
For GM Powertrain Group - Bedford Plant, Bedford

I. Purpose

The United States Environmental Protection Agency (U.S. EPA) and General Motors Corporation (GM), collectively referred to as the Parties, establish this Agreement to enable GM to work independently and voluntarily to investigate, and as necessary stabilize and remediate releases of hazardous wastes or hazardous constituents at or from the GM Powertrain Group-Bedford Plant, more particularly delineated in attached Figure 1, (the "Site") located in Bedford, Indiana that may present an unacceptable risk to human health or the environment. The Parties believe that GM will appropriately, efficiently and effectively investigate and, as necessary, remediate the Site on an accelerated basis by following the procedures and guidelines in this Agreement.

II. Background

The Site (U.S. EPA ID# IND006036099) is located at 105 GM Drive, Bedford (Lawrence County), Indiana, 47421. The Bedford Plant produces aluminum casting products, such as transmission cases, pistons, and engine blocks. Major aluminum production processes include die casting and permanent molding.

The Site is bounded to the south by the Canadian and Pacific Railway, Imco, and residential property, to the east by undeveloped land and residential areas, to the north by residential and undeveloped areas, and to the west by former railway, residential, and industrial property.

The Site was originally developed in the early 1900s as limestone milling operations. In 1942, the operation became an Allison Aircraft aluminum engine foundry. After World War II, the Site remained an aluminum foundry, casting automotive parts as part of various General Motors divisions, including Delco-Remy, Allison, Fabricast, Central Foundry, and Powertrain. The Bedford Plant is still in operation today. In 1977, GM purchased a piece of property from the railroad, south of the original Plant, that had formerly included the railroad roundhouse. This property was leased by Mica Metals (a dross reclaimer of aluminum) until 1997. Other parcels, mostly undeveloped, have also been purchased over the years to the north and east of the original property boundaries. The Site today includes 152.5 acres (see attached site map in Figure 1), with approximately one million square feet of floor space.

U.S. EPA and GM expect that GM will investigate, and as necessary remediate, all releases of hazardous wastes or constituents at or from the Site under the guidelines established in this Voluntary Corrective Action Agreement.

III. Definitions

Unless otherwise specified herein, terms used in this Agreement which are defined in RCRA or in regulations promulgated under RCRA will have the definitions given to them in RCRA or in such regulations.

IV. Project Manager

U.S. EPA and GM will each designate a Project Manager and notify each other in writing of the Project Manager selected within 14 days of the effective date of this Agreement. Each Project Manager will be responsible for overseeing the implementation of this Agreement. The parties will provide prompt written notice whenever they change Project Managers.

V. Work to be Performed

GM agrees to perform the actions specified in this section, in the manner and by the dates specified herein. GM will perform the work undertaken pursuant to this Agreement in compliance with RCRA and other applicable Federal and State laws and their implementing regulations, and consistent with all relevant U.S. EPA guidance documents as appropriate to the Site. This guidance includes, but is not limited to, the Documentation of Environmental Indicator Determination Guidance, and relevant portions of the Model Scopes of Work for RCRA Corrective Action and of U.S. EPA's Risk Assessment Guidance for Superfund.

1. GM will complete activities necessary to identify and define the nature and extent of releases of hazardous waste and/or hazardous constituents at or from the Site. These activities include:

    a. Provide to U.S. EPA, within 120 days after the effective date of this Agreement, a brief Current Conditions Report covering all areas of the Site. The Current Conditions Report will include any recent sampling data and a summary of the historic operations, remedial efforts, and physical setting of the Site. The Current Conditions Report, in total, will describe, at a minimum, conditions at the locations identified in the Indiana Department of Environmental Management (IDEM) Preliminary Assessment, dated April 30, 1985 and any past or present locations at the Site for which GM knows of past treatment, storage, or disposal of hazardous waste or hazardous constituents.

    b. Perform phased investigations, at a minimum, at the locations identified in the Current Conditions Report as needing further investigation to identify the nature and extent of any releases of hazardous waste and/or hazardous constituents at

or from the Site which may pose an unacceptable risk to human health or the environment, and provide a report to U.S. EPA. The report will also describe the nature and extent of any releases of hazardous waste and/or hazardous constituents at or from the Site which do not pose an unacceptable risk to human health or the environment, and provide the basis for those conclusions, including an evaluation of the risks. The report may be prepared in phases to provide timely support for the demonstrations described in Section V.2, below, and for the determinations and proposal described in Section V.3, below. If investigation determines that acceptable risks to human health or the environment are exceeded, GM will determine the need for interim measures based on a professional evaluation of the data and will notify the U.S. EPA of the planned course of action.

c. GM may choose to proceed with remedial actions to limit site investigation or risk assessment activities in order to complete the work as defined in Sections V.2 and V.3 below.

2. GM will demonstrate by the dates indicated, through submitting an Environmental Indicators Report and by performing any other necessary activities, consistent with this Section, that:

   a. By January 30, 2005, all current human exposures to contamination at or from the Site are under control. That is, for all media known or reasonably suspected to be contaminated with hazardous wastes or hazardous constituents above risk-based levels, for which there are complete pathways between contamination and human receptors, significant or unacceptable exposures do not exist.

   b. By April 30, 2007, migration of contaminated groundwater at or from the Site is stabilized. That is, the migration of all groundwater known or reasonably suspected to be contaminated with hazardous wastes or hazardous constituents above acceptable levels is stabilized to remain within any existing areas of contamination as defined by monitoring locations designated at the time of the demonstration. In addition, any discharge of groundwater to surface water is either insignificant or shown to be currently acceptable according to an appropriate interim assessment. Monitoring and measurement data must be collected in the future as necessary to verify that migration of any contaminated groundwater is stabilized.

   c. In order to prepare for and provide the demonstrations required by Sections V.2.a and V.2.b., above, GM will:

      i. Determine appropriate risk screening criteria under current use scenarios and provide the basis and justification for the use of these criteria.

      ii. Determine any current unacceptable risks to human health and the environment and describe why other identified risks are acceptable.

iii. Control any unacceptable current human exposures that are identified. This may include performing any corrective actions or other response measures ("Corrective Measures") necessary to control current human exposures to contamination to within acceptable risk levels.

iv. Stabilize the migration of contaminated groundwater. This may include implementing any Corrective Measures necessary to stabilize the migration of contaminated groundwater.

v. Conduct groundwater monitoring to confirm that any contaminated groundwater remains within the original area of contamination.

vi. Prepare a report, either prior to or as part of the Environmental Indicators Report, that provides a description and justification for any interim actions performed to meet the requirements of this Section, including sampling documentation, construction completion documentation, and/or confirmatory sampling results.

3. Final Corrective Measures:

a. GM will propose to U.S. EPA by December 31, 2007, final Corrective Measures necessary to protect human health and the environment from all current and future unacceptable risks due to releases of hazardous waste or hazardous constituents at or from the Site (the "Final Corrective Measures Proposal"). The proposal will describe all Corrective Measures implemented at the Site since the effective date of this Agreement. It will also include a description of all other final Corrective Measures evaluated by GM, a detailed explanation of why the proposed final Corrective Measures were preferred by GM, and cost estimates for the final Corrective Measures evaluated. The proposal will also include a detailed schedule to construct and implement the final Corrective Measures and to submit a Final Remedy Construction Completion Report. This schedule will provide that as much of the initial construction work as practicable will be completed within one year after U.S. EPA selects the final Corrective Measures and that all final Corrective Measures will be completed within a reasonable period of time to protect human health and the environment.

b. As part of developing its proposals, GM must propose appropriate risk screening criteria, cleanup objectives, and points of compliance under current and reasonably expected future land use scenarios and provide the basis and justification for these decisions.

c. U.S. EPA may request supplemental information from GM if it determines that the proposals and supporting information do not provide an adequate basis to select final Corrective Measures that will protect human health and the environment from the release of hazardous waste or hazardous constituents at or

from the Site. GM will provide such supplemental information in a timely manner as directed in writing by U.S. EPA.

d. U.S. EPA will provide the public with an opportunity to review and comment on its proposed final Corrective Measures, including a detailed description and justification for the proposals (the "Statement of Basis"). Following the public comment period, U.S. EPA will select the final Corrective Measures and provide notification of its decision and rationale in a "Final Decision and Response to Comments ("Final Decision").

e. If GM agrees with U.S. EPA's selection of final Corrective Measures, GM will implement the final Corrective Measures selected in U.S. EPA's Final Decision according to the schedule therein.

4. Reporting and other requirements:

a. GM will establish a publicly accessible repository for information regarding site activities and conduct public outreach and involvement activities in accordance with U.S. EPA's RCRA public participation guidance, as appropriate for the Site.

b. GM will provide quarterly progress reports to U.S. EPA by the 15th day of the month following a quarter. The report will list work performed to date, data collected, problems encountered, project schedule, and percent project completed. The parties will communicate frequently and in good faith to assure successful completion of the requirements of this Agreement, and will meet on at least a semi-annual basis to discuss the work proposed and performed under this Agreement.

c. GM will provide a Final Remedy Construction Completion Report documenting all work that it has performed pursuant to the schedule in U.S. EPA's Final Decision.

d. If ongoing monitoring or operation and maintenance is required after construction of the selected final Corrective Measures, GM will include an operations and maintenance plan in the Final Remedy Construction Completion Report. GM will revise and resubmit the Report in response to U.S. EPA's written comments, if any, by the dates U.S. EPA specifies. Upon U.S. EPA's written approval, GM will implement the approved operation and maintenance plan according to the schedule and provisions contained therein.

e. Any risk assessments conducted by GM must estimate human health and ecological risk under reasonable maximum exposure for both current and reasonably expected future land use scenarios. Risk assessments will be conducted in accordance with the Risk Assessment Guidance for Superfund (RAGS) or other appropriate U.S. EPA guidance. GM will use appropriate, conservative screening values when screening to determine whether further investigation is required. Appropriate screening values may include those

derived from Federal Maximum Contaminant Levels, U.S. EPA Region 9 Preliminary Remediation Goals, U.S. EPA Region 5 Ecological Screening Levels, U.S. EPA Region 5 Risk Based Screening Levels, U.S. EPA Region 3 Risk Based Concentration Table, or RAGS.

f. All sampling and analysis conducted under this Agreement will be performed in accordance with the Region 5 RCRA Quality Assurance Project Plan Policy (April 1998) as appropriate for the Site, and be sufficient to identify and characterize the nature and extent of all releases. U.S. EPA may audit laboratories selected by GM or require GM to purchase and have analyzed any Performance Evaluation (PE) samples selected by U.S. EPA which are compounds of concern. GM will notify U.S. EPA in writing at least 14 days before beginning each separate phase of field work performed under this Agreement. At the request of U.S. EPA, GM will provide or allow U.S. EPA or its authorized representative to take split or duplicate samples of all samples collected by GM under this Agreement.

VI. Record Preservation

GM will retain, during the pendency of this Agreement and for at least six (6) years after termination of the entire Agreement, all data and all final documents now in its possession or control or which come into its possession or control which relate to this Agreement. GM will notify U.S. EPA in writing 90 days before destroying any such records, and provide U.S. EPA the opportunity to take possession of any such non-privileged documents. GM's notice will refer to the effective date, caption, and docket number of this Agreement and will be addressed to:

Director
Waste, Pesticides and Toxics Division
U.S. EPA, Region 5 (D-8J)
77 W. Jackson Blvd.
Chicago, IL 60604-3590

GM will also promptly provide U.S. EPA's Project Manager a copy of any such notice.

GM further agrees that within 30 days of retaining or employing any agent, consultant, or contractor ("Agents") to carry out the terms of this Agreement, GM will enter into an agreement with the Agents to provide GM a copy of all data and final non-privileged documents produced under this Agreement.

GM agrees that it will not assert any privilege claim concerning any data developed to prepare any reports or conduct any investigations or other actions taken under the Agreement.

VII. Modification, Termination and Satisfaction

This Agreement may be modified by written, mutual agreement of the Parties. The Project Managers may agree in writing to extend any deadline in this Agreement. Either Party may unilaterally terminate this Agreement upon written notice to the other Party. U.S. EPA's participation in this Agreement is subject to the Anti-Deficiency Act, 31 USC § 1341.

GM may request that U.S. EPA issue a determination that GM has met the corrective action cleanup objectives for the Site or a portion of the Site. GM will submit documentation that it has achieved the objectives and U.S. EPA will respond in writing indicating whether GM has completed RCRA corrective action. If U.S. EPA agrees that RCRA corrective action is complete it will issue a "No Further Action" determination for all or a portion of the Site.

The provisions of the Agreement will be satisfied upon GM's and U.S. EPA's execution of an "Acknowledgment of Termination and Agreement on Record Preservation and Reservation of Rights", consistent with U.S. EPA's Model Scope of Work. GM's execution of the Acknowledgment will affirm its continuing obligation to preserve all records as required by Section VI, to maintain any necessary institutional controls or other long term measures, and to recognize the Parties' reservation of rights as required in Section VIII.

VIII. Reservation of Rights

The Parties reserve any and all rights, remedies, authorities or defenses that they respectively have under law. Nothing in this Agreement limits or affects the authority or ability of either Party to take any action authorized by law. Nothing in this Agreement creates any legal rights, claims or defenses in either Party or by or for any third Party. Nothing in this Agreement relieves GM from complying with applicable federal, state and local laws.

This Agreement does not limit or affect the rights of the Parties against any Third Party, nor does it limit the rights of Third Parties. The Parties agree that this Agreement does not constitute any decision on pre-authorization of funds under §111(a)(2) of CERCLA.

IX. Effective Date

This Agreement is effective on the date the last Party signs.

DATE: 3-20-01 BY: William J McFarland

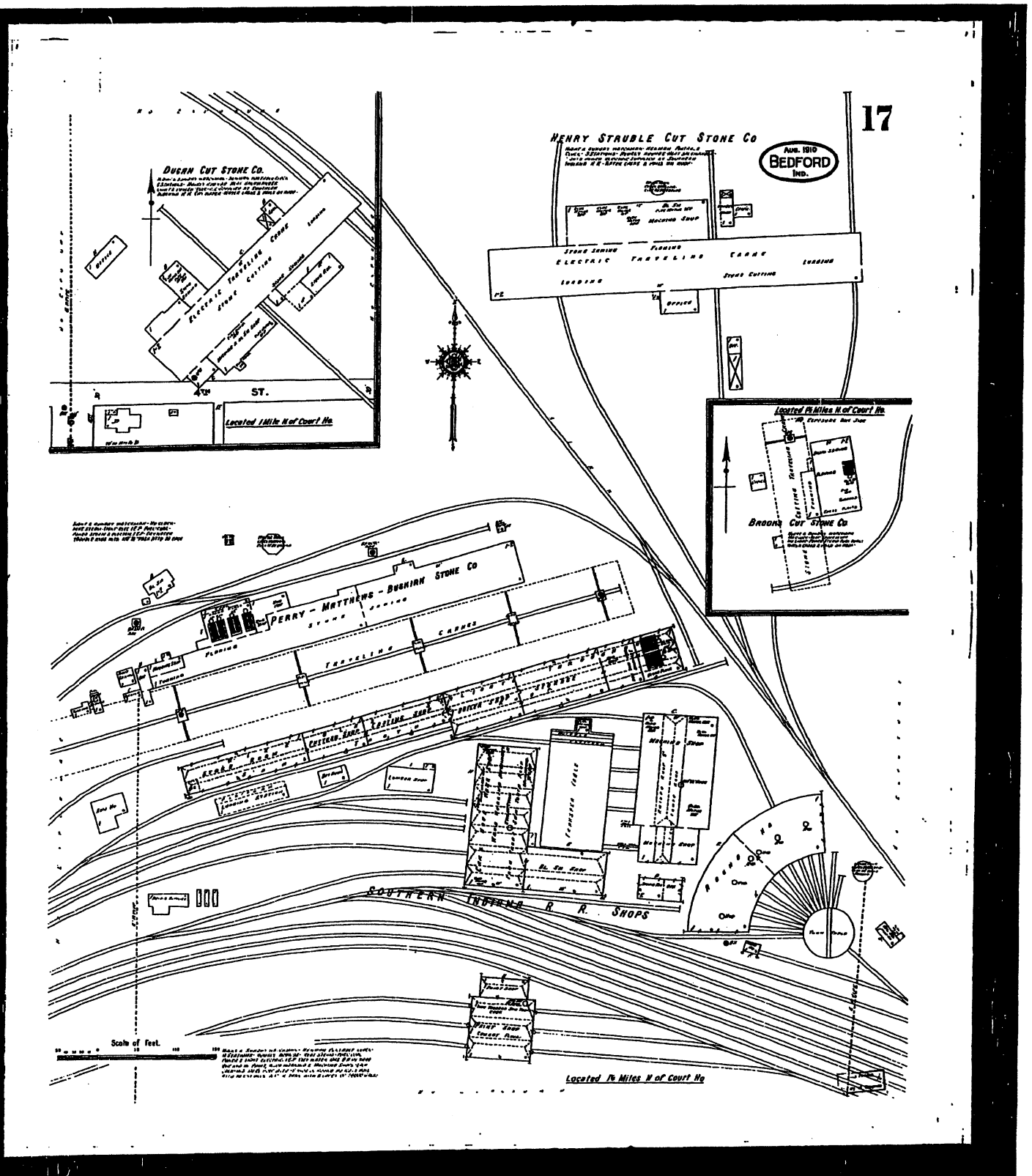
William J. McFarland, Director
Remediation
Worldwide Facilities Group
General Motors Corporation

DATE: March 16, 2001 BY: Robert Springer

Robert Springer, Director
Waste, Pesticides and Toxics Division
U.S. Environmental Protection Agency
Region 5

APPENDIX B.1

SANBORN MAPS



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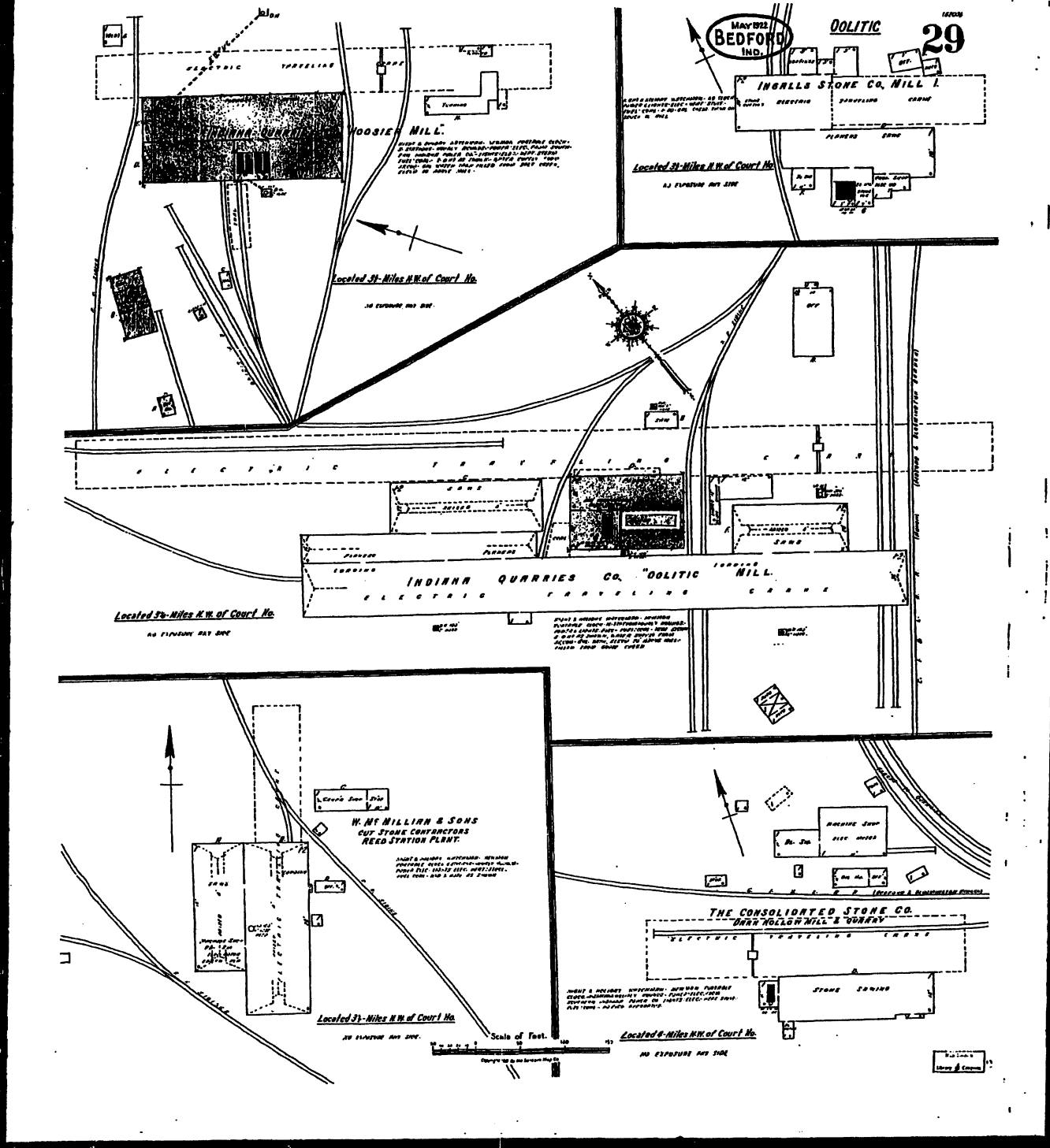

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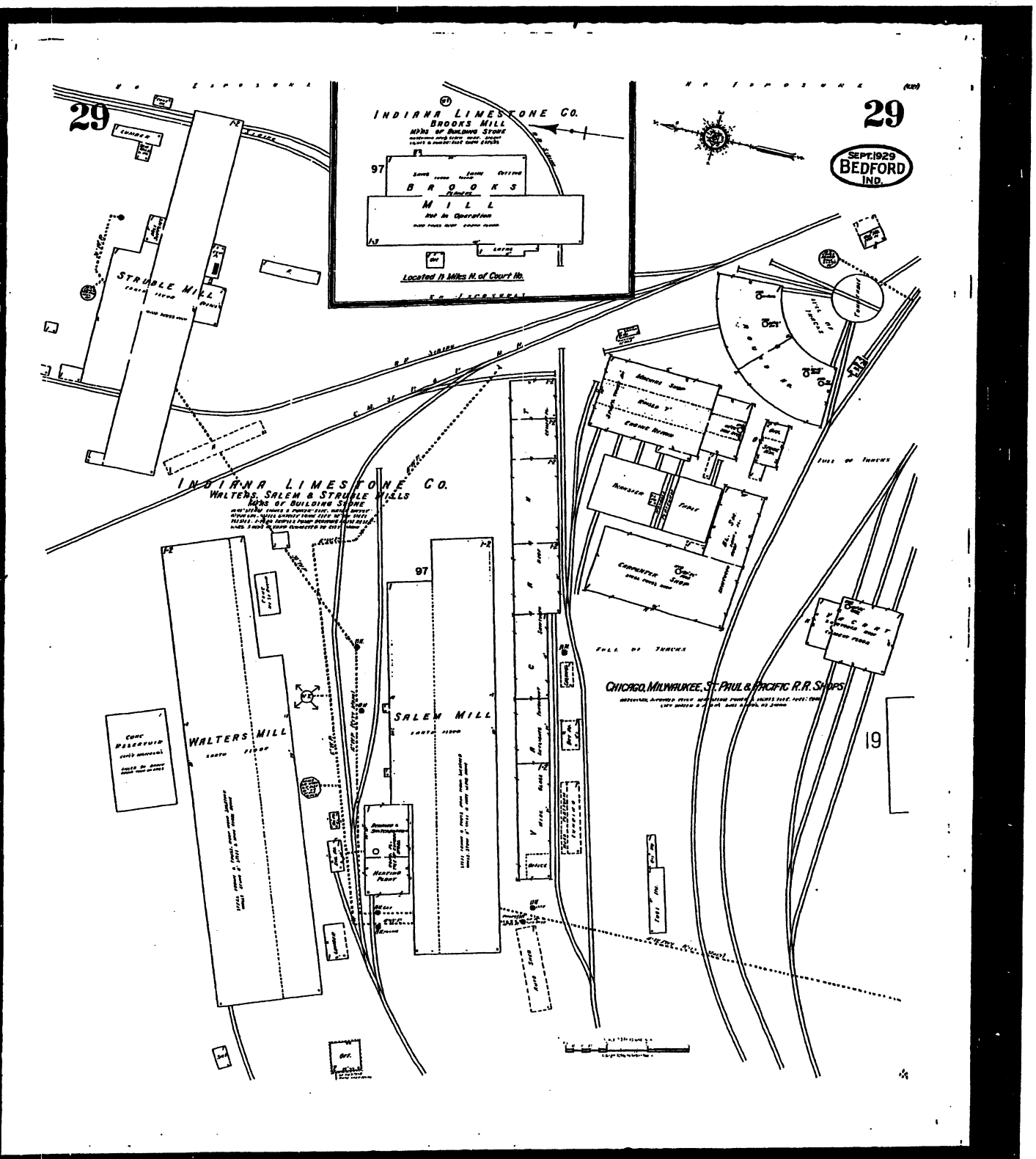

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Year EDR Research Associate

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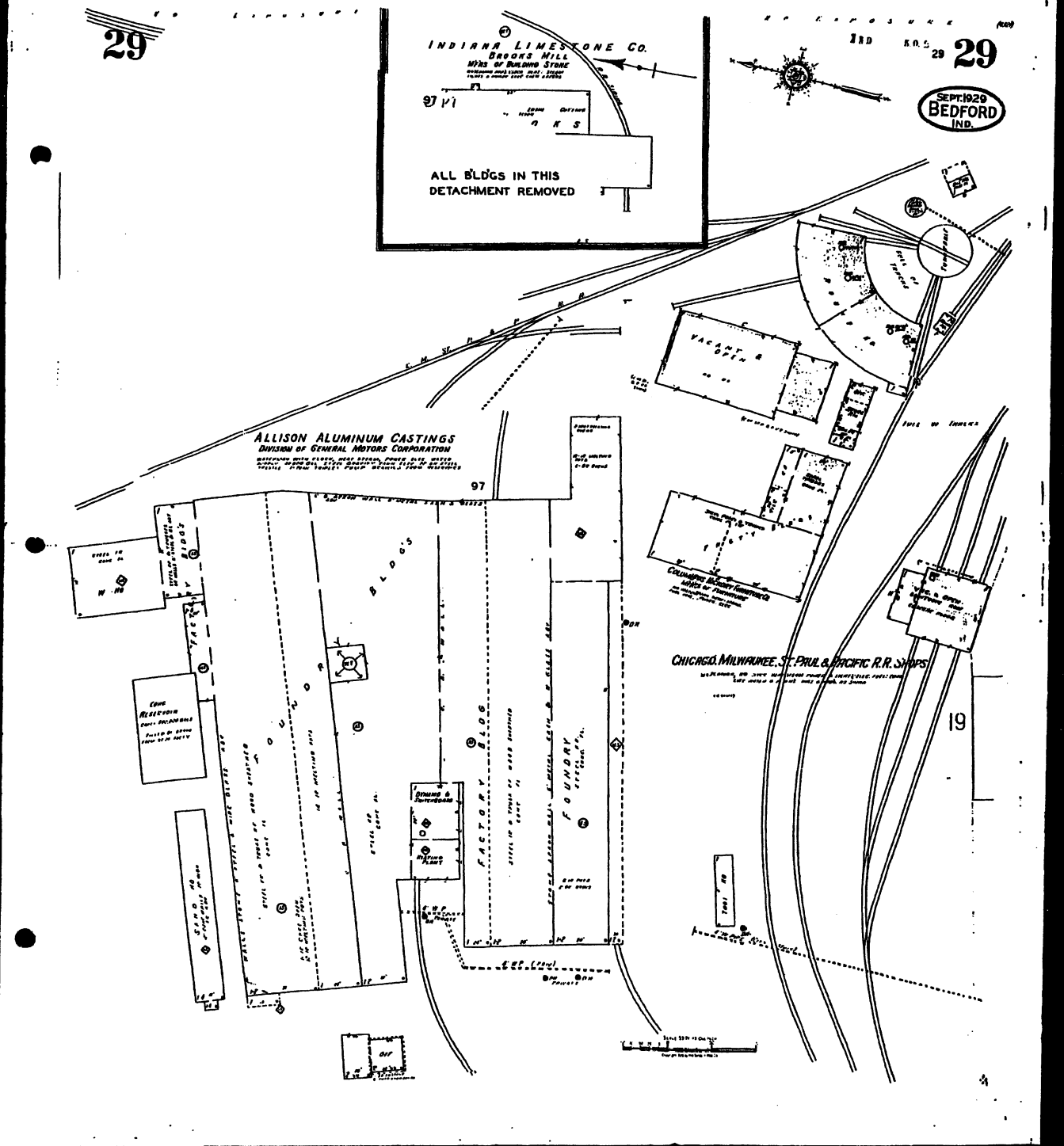

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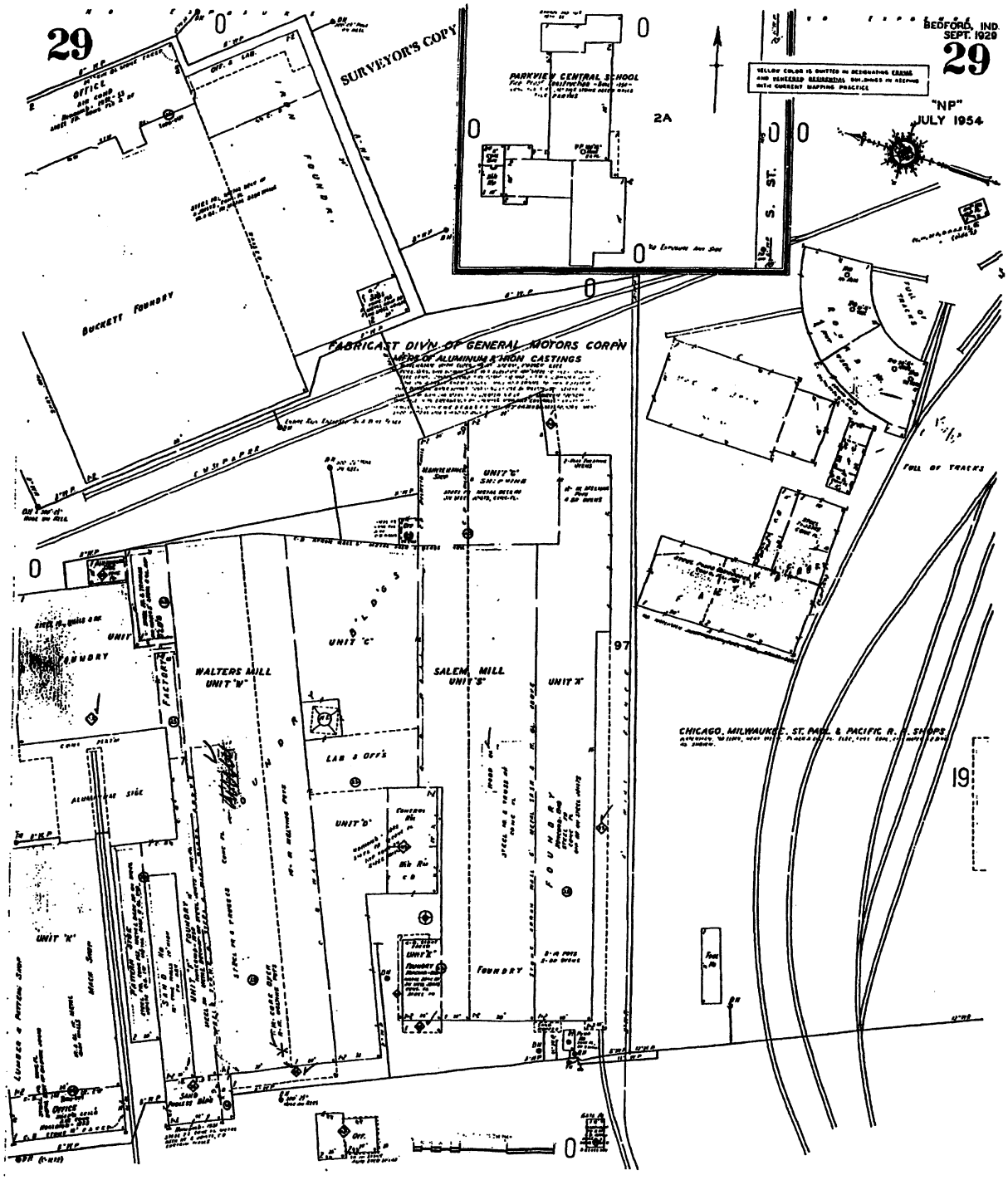

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MAY 25, 2001

APPENDIX B.2

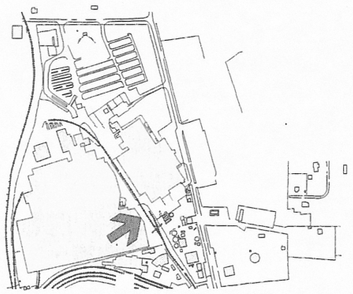
HISTORICAL PHOTOGRAPHS

May 25, 2001

LIST OF HISTORICAL PHOTOGRAPHS

HISTORICAL PHOTOGRAPH 1	STONEMILLS 1923
HISTORICAL PHOTOGRAPH 2	STONEMILL AND RAILROAD BUILDINGS 1923
HISTORICAL PHOTOGRAPH 3	STONEMILLS 1923
HISTORICAL PHOTOGRAPH 4	DELCO REMY OPERATION 1945
HISTORICAL PHOTOGRAPH 5	BEDFORD FACILITY 1952
HISTORICAL PHOTOGRAPH 6	BEDFORD FACILITY 1970
HISTORICAL PHOTOGRAPH 7	BEDFORD FACILITY 1970
HISTORICAL PHOTOGRAPH 8	BEDFORD FACILITY 1970
HISTORICAL PHOTOGRAPH 9	BEDFORD FACILITY 1975
HISTORICAL PHOTOGRAPH 10	BEDFORD FACILITY 1979
HISTORICAL PHOTOGRAPH 11	BEDFORD FACILITY 1999
HISTORICAL PHOTOGRAPH 12	FORMER NORTH LAGOON UNDATED
HISTORICAL PHOTOGRAPH 13	FORMER NORTH LAGOON UNDATED
HISTORICAL PHOTOGRAPH 14	BEDFORD FACILITY UNDATED
HISTORICAL PHOTOGRAPH 15	BEDFORD FACILITY UNDATED
HISTORICAL PHOTOGRAPH 16	BEDFORD FACILITY UNDATED
HISTORICAL PHOTOGRAPH 17	BEDFORD FACILITY UNDATED
HISTORICAL PHOTOGRAPH 18	BEDFORD FACILITY UNDATED
HISTORICAL PHOTOGRAPH 19	BEDFORD FACILITY UNDATED
HISTORICAL PHOTOGRAPH 20	BEDFORD FACILITY UNDATED
HISTORICAL PHOTOGRAPH 21	BEDFORD FACILITY UNDATED



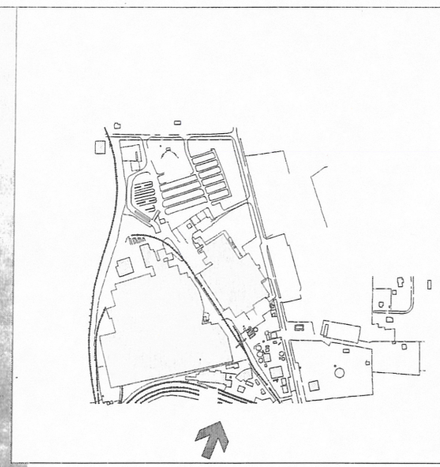


Historical Photograph 1

1923

Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 1923 Photoset Scan 22.cdr



Historical Photograph 2

1923

Historical Photograph
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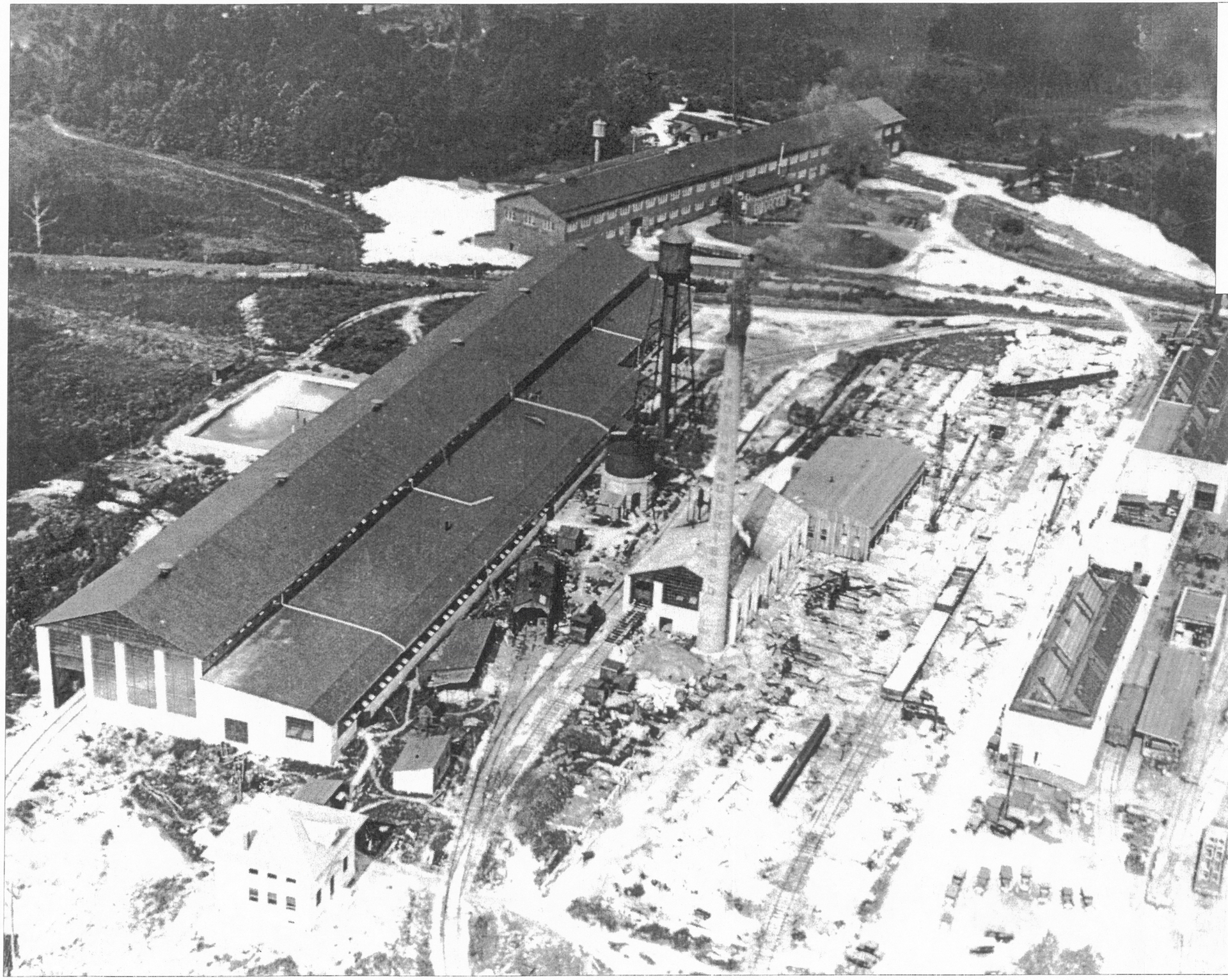
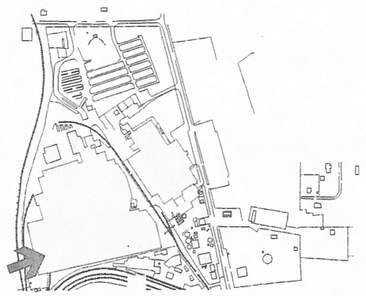
Bedford, Indiana

13968 1923 Photoset Scan 25.cdr



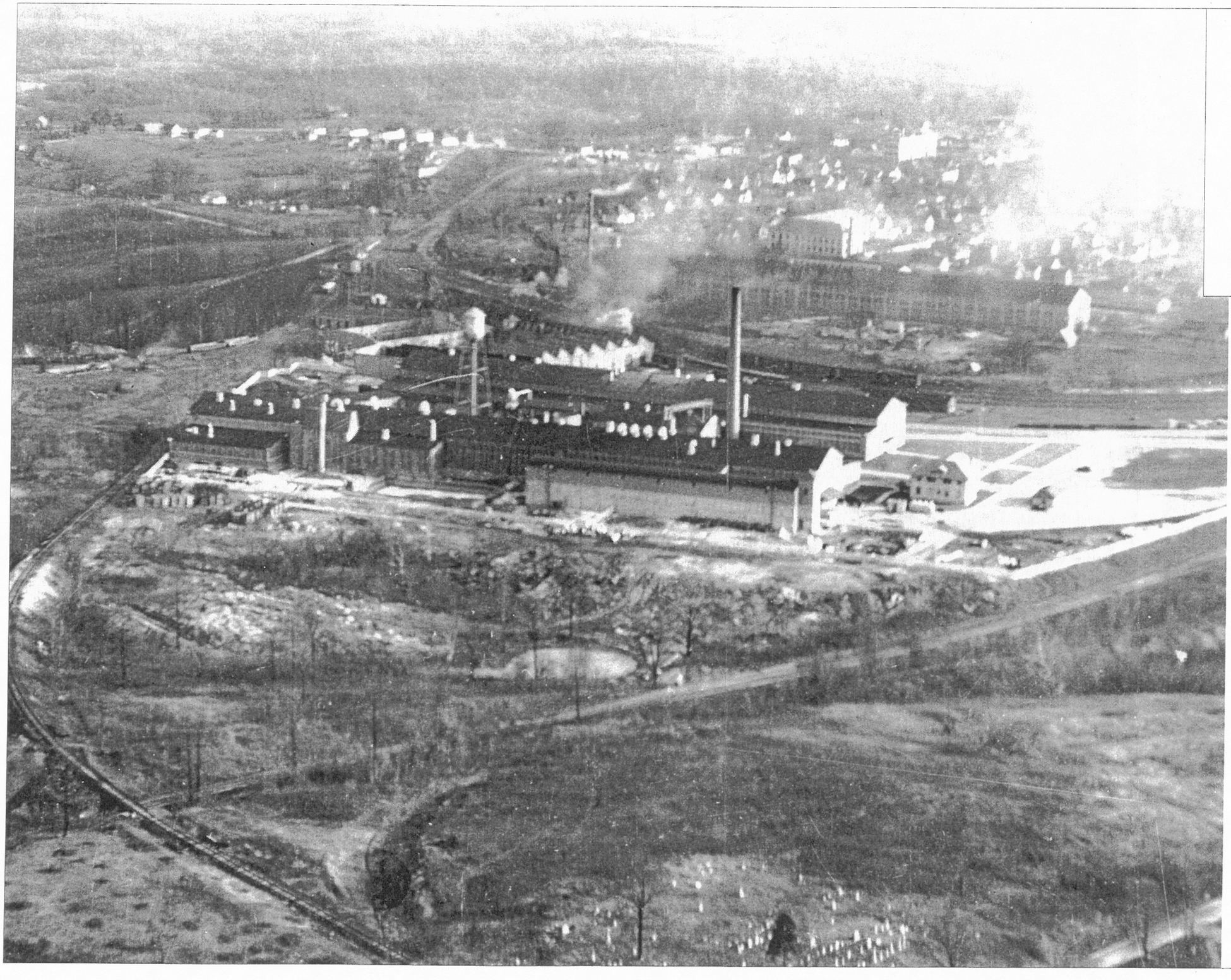


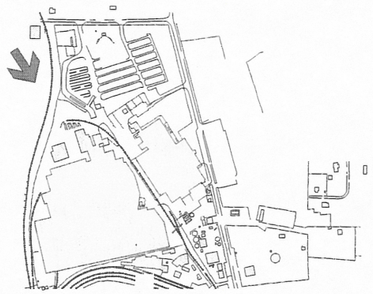
Historical Photograph 3

1923

Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 1923 Photoset Scan 24.cdr



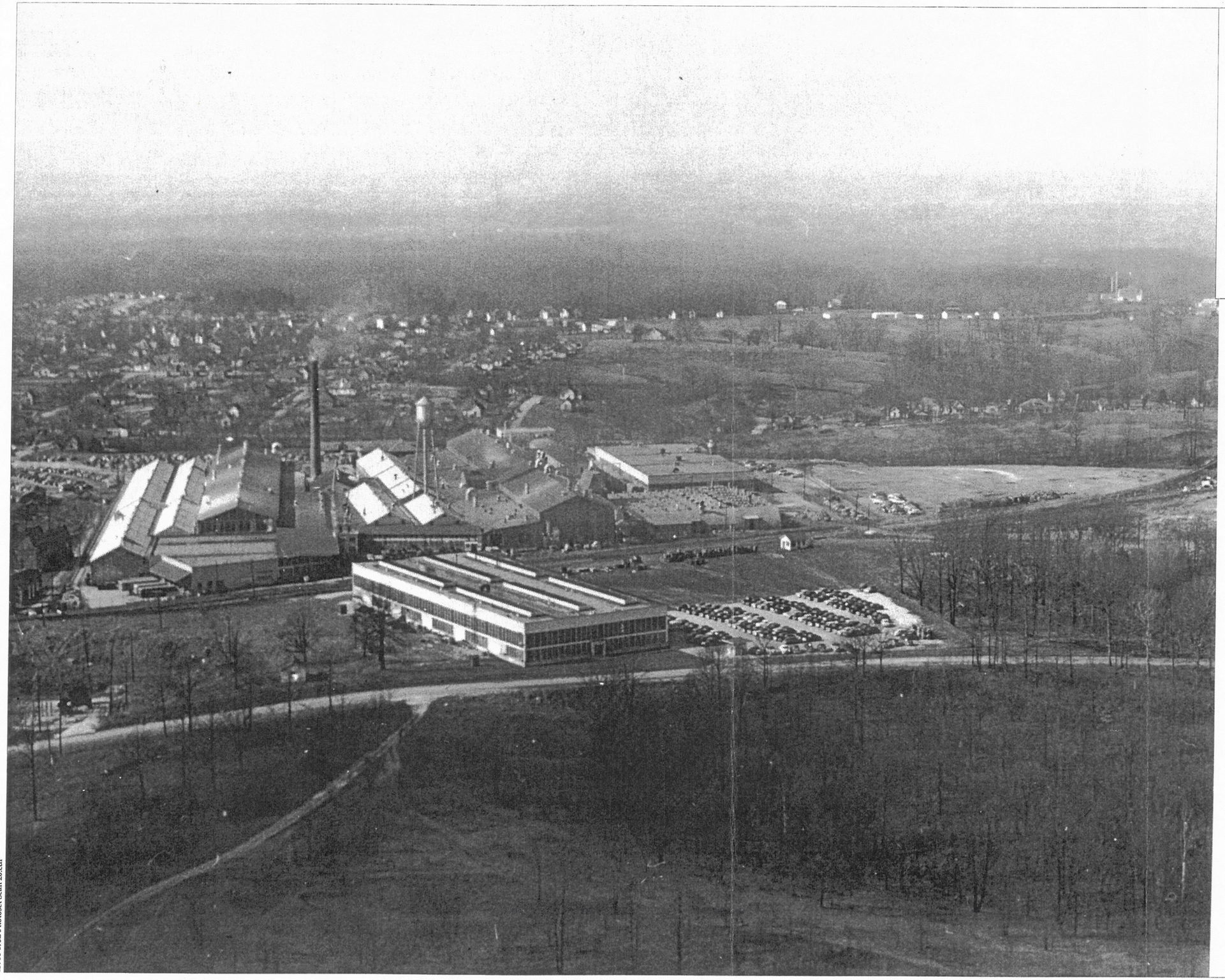


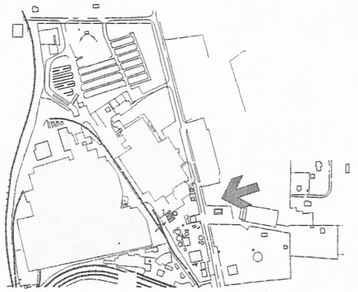
Historical Photograph 4

1945

Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 1945 Photoset Scan 23.cdr





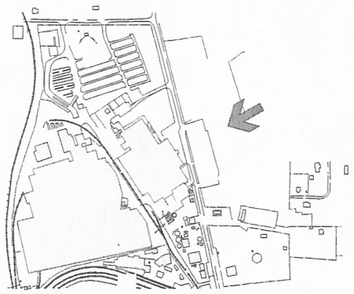
Historical Photograph 5

1952

Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 1952 Photoset Scan 20.cdr



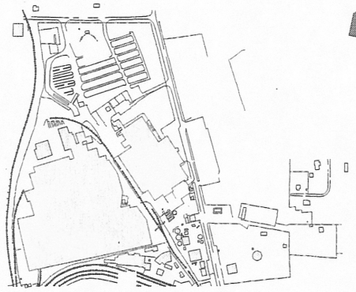


Historical Photograph 6

1970

Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 1970 Photoset Scan 07.cdr



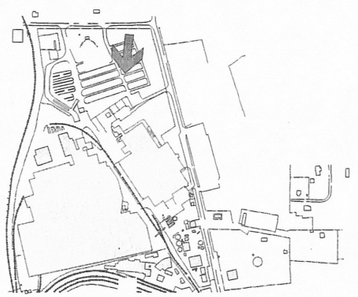
Historical Photograph 7

1970

Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 1970 Photoset Scan 08.cdr





Historical Photograph 8

1970

Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 1970 Photoset Scan 10.cdr





Historical Photograph 9

1975

Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 1975 Color.cdr



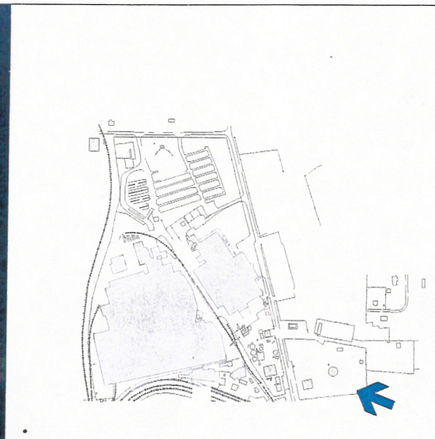
Historical Photograph 10

1979

Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 1979 (4-16-79) Abrams GHT-4.cdr



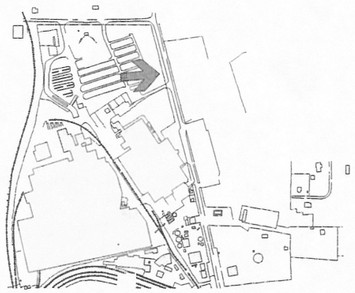


Historical Photograph 11

1999

Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 1999 Color.cdr



Historical Photograph 12

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Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

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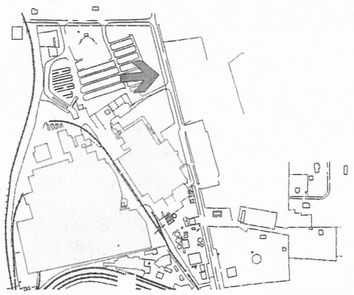

Historical Photograph 13

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Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

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Historical Photograph 14

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Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

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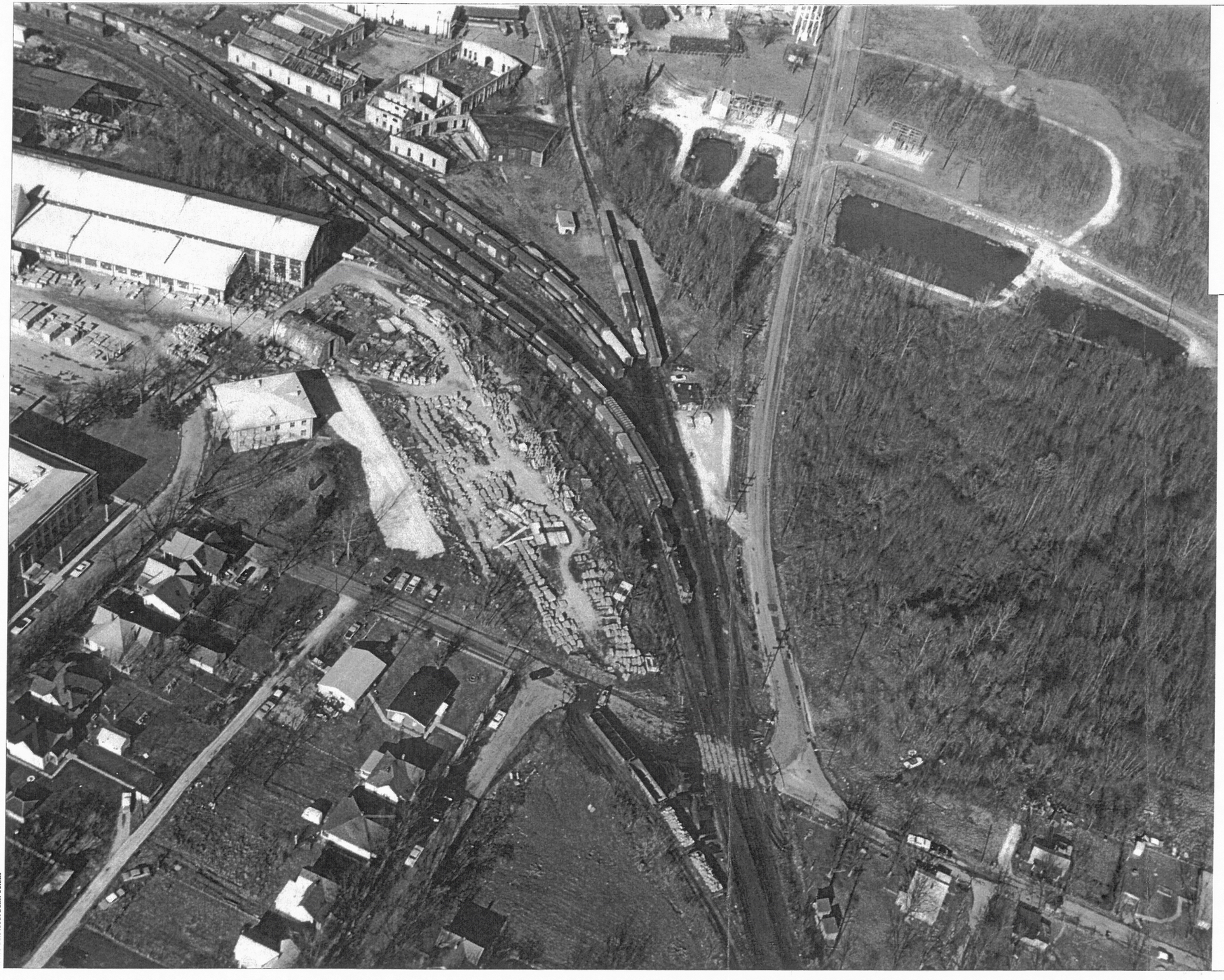

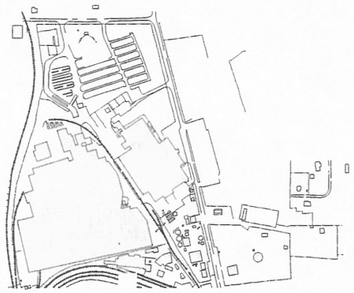

Historical Photograph 15

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GM Powertrain Bedford Facility
Bedford, Indiana

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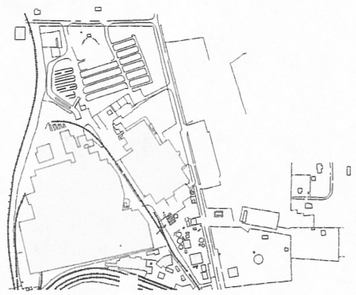

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Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

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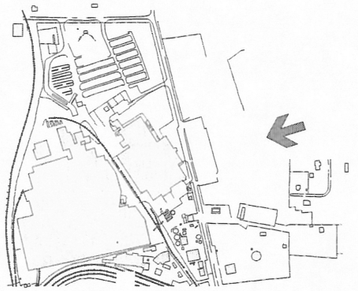

Historical Photograph 17

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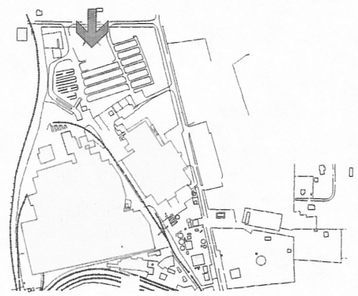
Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 Photoset Scan 17.cdr





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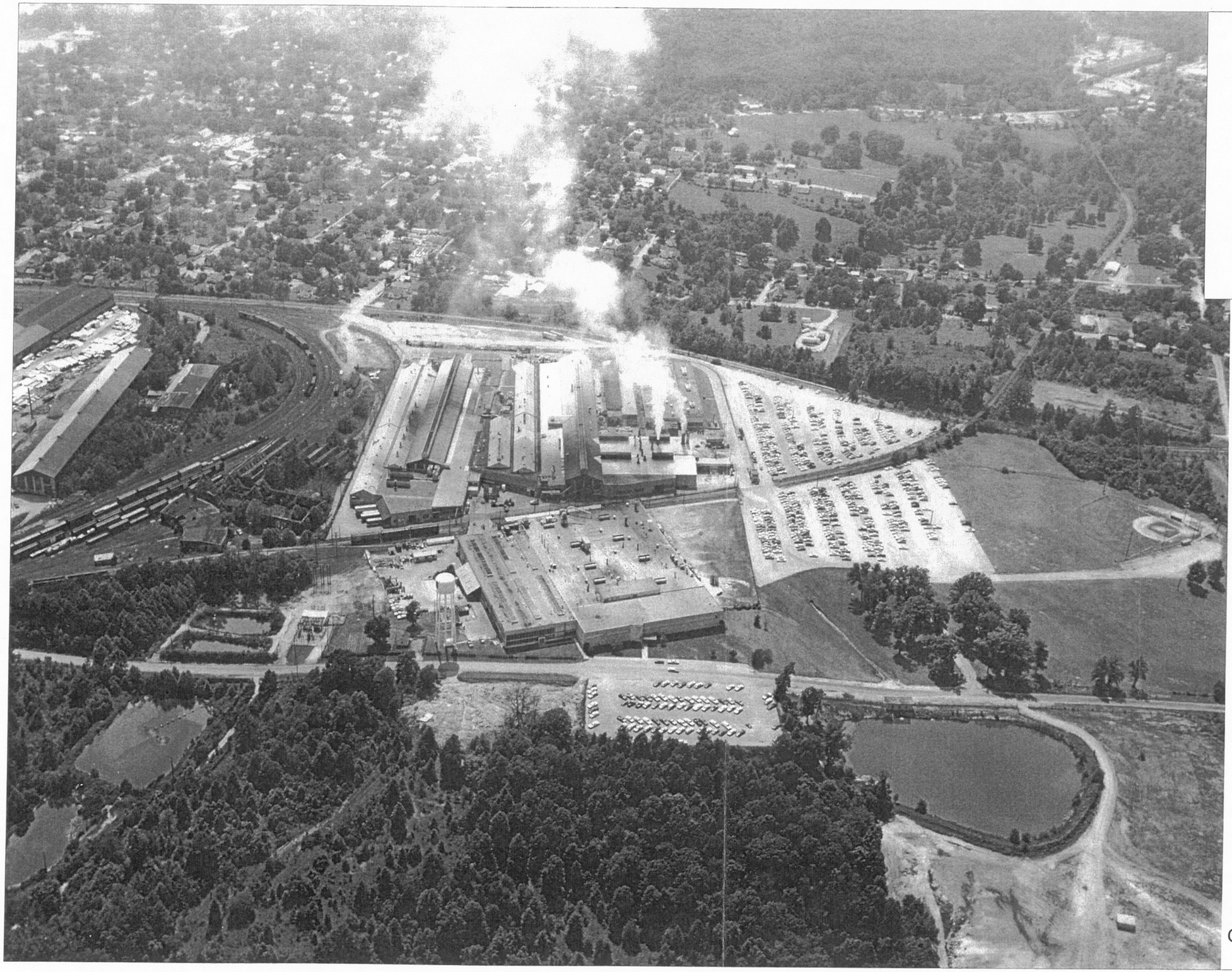
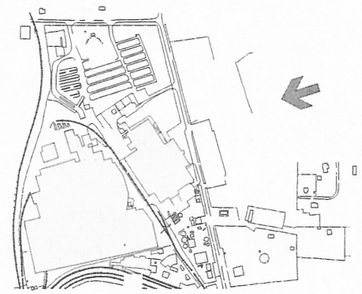
Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 Photoset Scan 16.cdr





Historical Photograph 19

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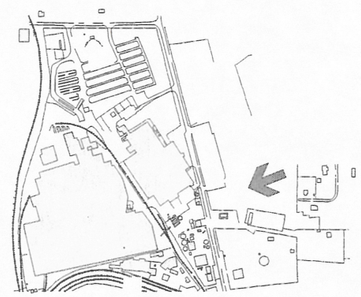
Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 Photoset Scan 15.cdr





Historical Photograph 20

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Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 Photoset Scan 14.cdr





Historical Photograph 21

UNDATED

Historical Photograph
GM Powertrain Bedford Facility
Bedford, Indiana

13968 Photoset Scan 12.cdr

MAY 25, 2001

APPENDIX B.3

SPCC

GENERAL MOTORS CORPORATION
POWERTRAIN GROUP, BEDFORD PLANT

105 GM Drive
Bedford, Indiana 47421
24 Hour #: (812) 279-7360

Latitude 38° 52"43'N
Longitude 86° 9"04'W

Release Plan

(Spill Prevention Control and Countermeasure; Contingency; and HAZWOPER Plan)

November 1998

Prepared By: S.L. Albert
Approved By: B.A. Alexander

Project No. 3162-08/09

CHESTER ENGINEERS
3830 Packard Road, Suite 120 · Ann Arbor, MI 48108
734-973-0700 · Fax 734-973-2904

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BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
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GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
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GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
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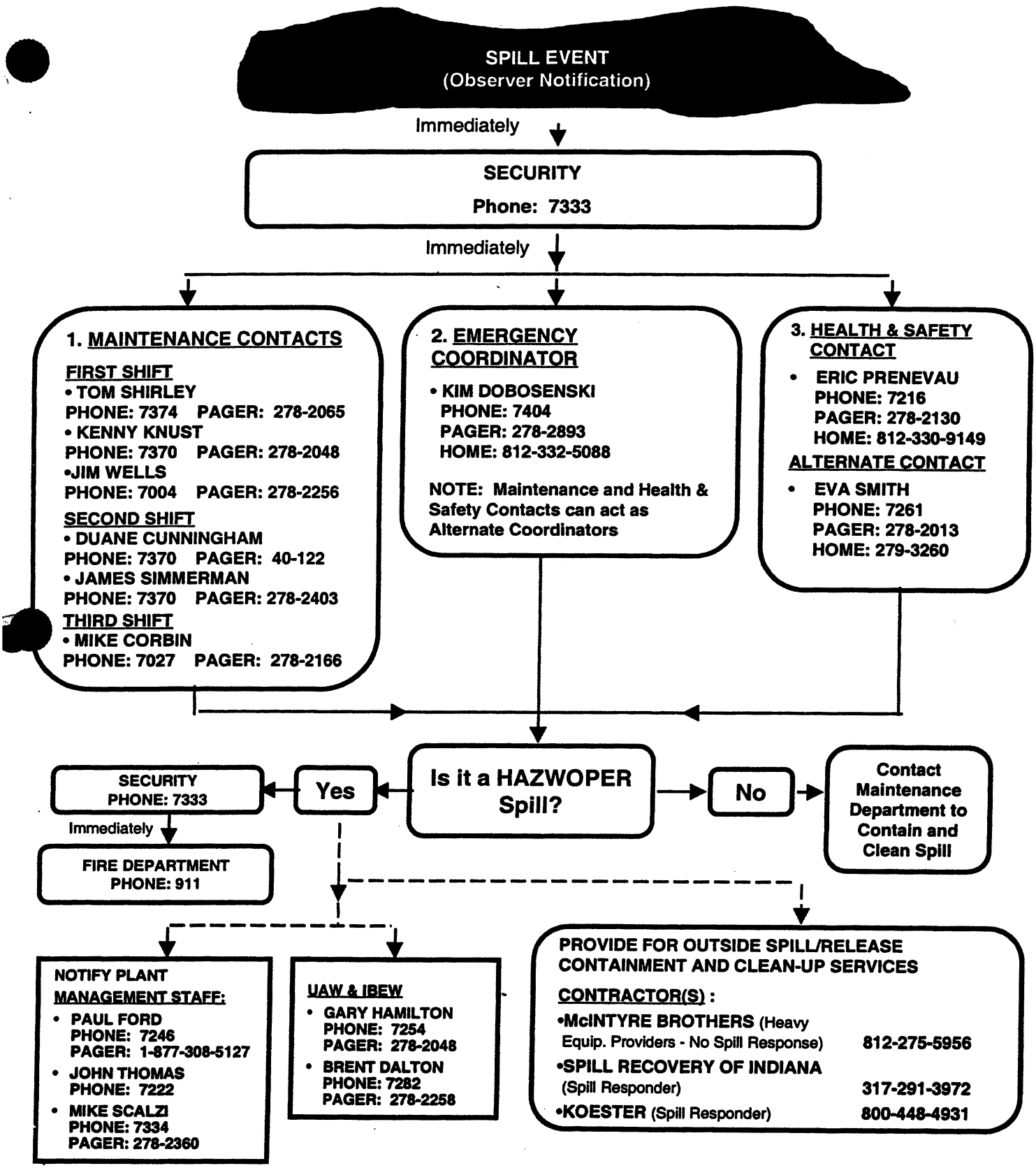
Attachment D	GM Procedures for Disposal of Wastes
Attachment E	Bedford Public Relations Guidelines
Attachment F	Inspection Forms
Attachment G	GM Truck Loading/Unloading Procedures
Attachment H	Evacuation Plan
Attachment I	SPCC Checklist
Attachment J	Spill History (Included in Environmental Department's copy of plan only.)
Attachment K	Communications with Local Response / Emergency Facilities (Included in Environmental Department's copy of plan only.)
Attachment L	Arrangements with Clean-Up Contractors
Attachment M	Certificate of Liability Insurance from External Spill Responders

APPENDIX

Appendix 1	Certification of the Applicability of the Substantial Harm Criteria
Appendix 2	PCB Addendum
Appendix 3	Emergency Spill Response Plan (HAZWOPER)

INTERNAL NOTIFICATION FLOWCHART



mediately" means as soon as possible but no later than 5 minutes of knowledge of spill.

2. Immediately page the individual after a voice message, that is marked urgent, has been left at the phone number.

3. When paging, enter "911" BEFORE the phone number the person is to call.

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 1.0 PLAN INTRODUCTION AND ELEMENTS

1.1 PURPOSE AND SCOPE OF PLAN COVERAGE

This Release Plan has been prepared to consolidate the Spill Prevention Control and Countermeasure Plan, Contingency Plan and the Emergency Spill Response Plan (HAZWOPER) for the General Motors Bedford facility. The purpose of the Release Plan is to provide for preventing unintentional releases of oil and hazardous materials/wastes into the environment and to outline emergency preparedness and response in the event of such a release.

1. Code of Federal Regulations 40 CFR 112 require facilities handling oil to develop a Spill Prevention Control and Countermeasure Plan (SPCC).
2. Code of Federal Regulations 40 CFR 265 requires facilities that generate hazardous waste to develop a Contingency Plan for preparedness and prevention of unintentional releases into the environment.
3. Code of Federal Regulations 29 CFR 1910.120 requires facilities that engage in emergency response to develop an emergency response plan.

In addition, the plan meets the requirements of CERCLA, SARA, and TSCA. This plan shall be updated in accordance with Section 8.0 - Plan Amendment and Submission Requirements.

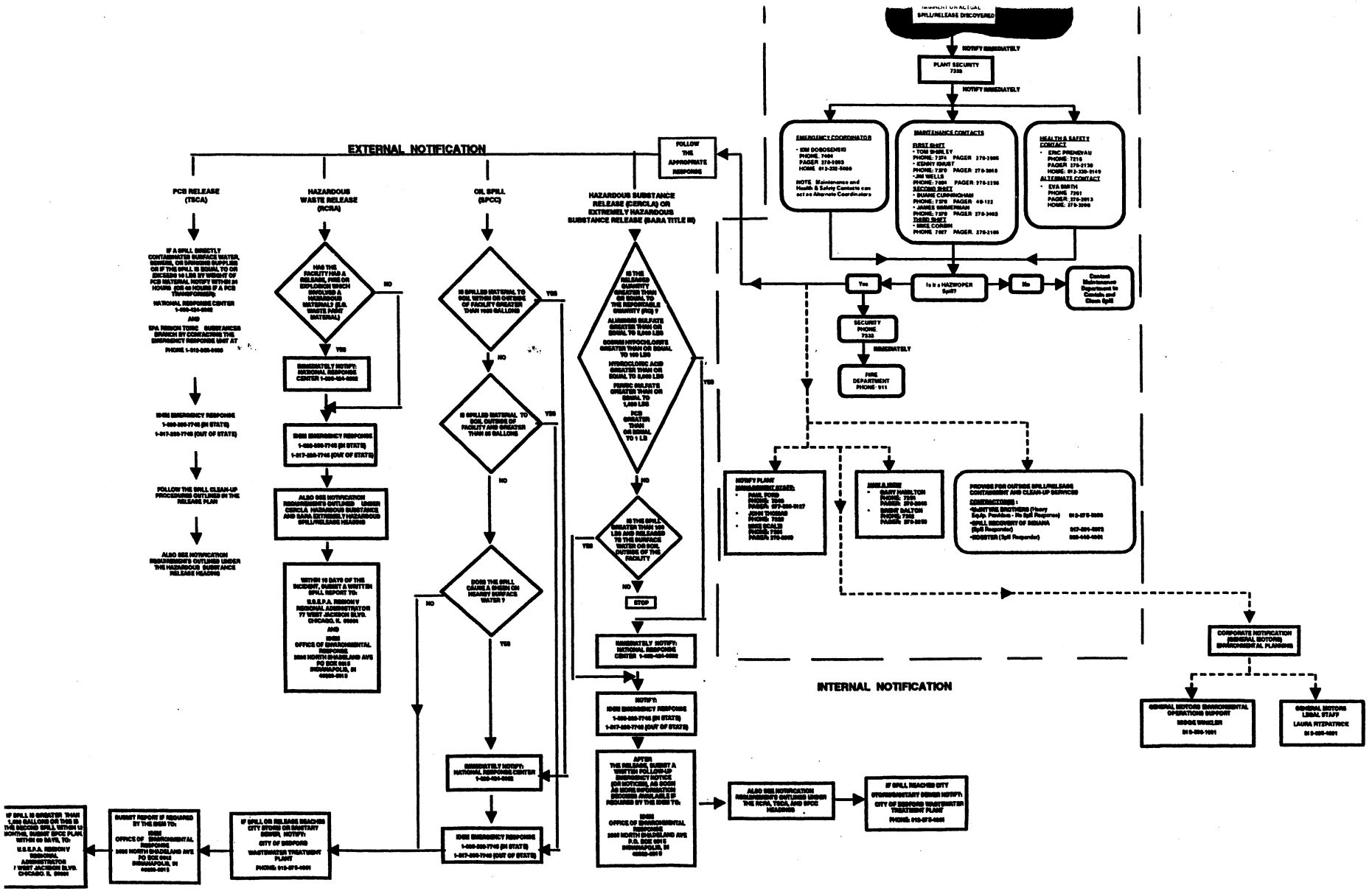
1.2 GENERAL FACILITY INFORMATION

Facility Name:	GMC, Powertrain Group, Bedford Plant
Owner/Operator:	GMC, Powertrain Group
Physical Address:	105 GM Drive (formerly North Jackson Street) Bedford, IN 47421 Lawrence County Facility is located in the northeast portion of the City of Bedford.
Mailing Address:	105 GM Drive Bedford, IN 47421

Other Information:	SIC Code 3361 SIC Code 3363 EPA ID IND 006036099 Latitude 38° 52"43'N Latitude 86° 29"04'W
24 Hour Phone:	(812) 279-7360
Key Contacts:	Kimberly Dobosenski Environmental Engineer Phone: (812) 279-7404 Fax: (812) 279-7258 Eric Prenevau Health and Safety Director Phone: (812) 279-7216

1.3 PLAN IMPLEMENTATION

This Release Plan is to be followed by plant personnel whenever there is an unplanned sudden or non-sudden release of bulk storage products or of hazardous wastes to air, soil, or surface water of the facility which may cause personal injury or has the potential to leave the plant property.


EXTERNAL NOTIFICATION
PCB RELEASE (TSCA)
HAZARDOUS WASTE RELEASE (RCRA)
OIL SPILL (SPCC)
HAZARDOUS SUBSTANCE RELEASE (CERCLA) OR EXTREMELY HAZARDOUS SUBSTANCE RELEASE (SARA TITLE III)
FOLLOW THE APPROPRIATE RESPONSE
SPILL/RELEASE DISCOVERED
NOTIFY IMMEDIATELY
PLANT SECURITY 7335
NOTIFY IMMEDIATELY
EMERGENCY COORDINATOR
MAINTENANCE CONTACTS
HEALTH & SAFETY CONTACT
Yes
Is it a HAZWOPER Spill?
No
SECURITY PHONE 7335
IMMEDIATELY
FIRE DEPARTMENT PHONE- 911
INTERNAL NOTIFICATION
STOP
IMMEDIATELY NOTIFY: NATIONAL RESPONSE CENTER 1-800-424-8802
NOTIFY:
IDEM EMERGENCY RESPONSE
1-800-388-7745 (IN STATE)
1-317-308-7745 (OUT OF STATE)
AFTER THE RELEASE, SUBMIT A WRITTEN FOLLOW-UP EMERGENCY NOTICE (OR NOTICES, AS SOON AS SOME INFORMATION BECOMES AVAILABLE) IF REQUIRED BY THE IDEM TO:
IDEM
OFFICE OF ENVIRONMENTAL RESPONSE
2525 NORTH SHADELAND AVE
P.O. BOX 6015
INDIANAPOLIS, IN
46206-6015
ALSO SEE NOTIFICATION REQUIREMENTS OUTLINED UNDER THE RCRA, TSCA, AND SPCC HEADINGS
IF SPILL REACHES CITY STORM/SANITARY SEWER NOTIFY:
CITY OF BEDFORD WASTEWATER TREATMENT PLANT
PHONE: 812-275-4001
CORPORATE NOTIFICATION (GENERAL MOTORS ENVIRONMENTAL PLANNING)
GENERAL MOTORS ENVIRONMENTAL OPERATIONS SUPPORT
MIDGE WINKLER
812-256-1021
GENERAL MOTORS LEGAL STAFF
LAURA FITZPATRICK
812-256-1021
IF A SPILL DIRECTLY CONTAMINATES SURFACE WATER, SEWERS, OR DRINKING SUPPLIES OR IF THE SPILL IS EQUAL TO OR EXCEEDS 10 LBS BY WEIGHT OF PCB MATERIAL NOTIFY WITHIN 24 HOURS (OR 48 HOURS IF A PCB TRANSFORMER):
NATIONAL RESPONSE CENTER
1-800-424-8802
AND
EPA REGION TOXIC SUBSTANCES BRANCH BY CONTACTING THE EMERGENCY RESPONSE UNIT AT
PHONE 1-312-353-2318
IDEM EMERGENCY RESPONSE
1-800-388-7745 (IN STATE)
1-317-308-7745 (OUT OF STATE)
FOLLOW THE SPILL CLEAN-UP PROCEDURES OUTLINED IN THE RELEASE PLAN
ALSO SEE NOTIFICATION REQUIREMENTS OUTLINED UNDER THE HAZARDOUS SUBSTANCE RELEASE HEADING
DOES THE RELEASE QUANTITY EXCEED THAN OR EQUAL TO THE REPORTABLE QUANTITY (RQ) ?
ALUMINUM SULFATE GREATER THAN OR EQUAL TO 5,000 LBS
COPPER HYDROXIDE GREATER THAN OR EQUAL TO 10,000 LBS
HYDROCHLORIC ACID GREATER THAN OR EQUAL TO 5,000 LBS
FERRIC SULFATE GREATER THAN OR EQUAL TO 1,000 LBS
PCB GREATER THAN OR EQUAL TO 1 LB
DOES THE SPILL EXCEED THE REPORTABLE QUANTITY?
IS SPILLED MATERIAL TO SOIL OUTSIDE OF FACILITY AND GREATER THAN 55 GALLONS
DOES THE SPILL CAUSE A SHEEN ON NEARBY SURFACE WATER ?
IMMEDIATELY NOTIFY: NATIONAL RESPONSE CENTER 1-800-424-8802
IDEM EMERGENCY RESPONSE
1-800-388-7745 (IN STATE)
1-317-308-7745 (OUT OF STATE)
IS THE SPILL GREATER THAN 100 LBS AND RELEASED TO THE SURFACE WATER OR SOIL OUTSIDE OF THE FACILITY
DOES THE RELEASE EXCEED THE REPORTABLE QUANTITY?
IS SPILLED MATERIAL TO SOIL WITHIN OR OUTSIDE OF FACILITY GREATER THAN 1000 GALLONS
IMMEDIATELY NOTIFY: NATIONAL RESPONSE CENTER 1-800-424-8802
IDEM EMERGENCY RESPONSE
1-800-388-7745 (IN STATE)
1-317-308-7745 (OUT OF STATE)
ALSO SEE NOTIFICATION REQUIREMENTS OUTLINED UNDER THE RCRA, TSCA, AND SPCC HEADINGS
IF SPILL OR RELEASE REACHES CITY STORM OR SANITARY SEWER, NOTIFY:
CITY OF BEDFORD WASTEWATER TREATMENT PLANT
PHONE: 812-275-4001
SUBMIT REPORT IF REQUIRED BY THE IDEM TO:
IDEM
OFFICE OF ENVIRONMENTAL RESPONSE
2525 NORTH SHADELAND AVE
PO BOX 6015
INDIANAPOLIS, IN
46206-6015
IF SPILL IS GREATER THAN 1,000 GALLONS OR THIS IS THE SECOND SPILL WITHIN 12 MONTHS, SUBMIT SPCC PLAN WITHIN 60 DAYS, TO:
U.S.E.P.A. REGION V
REGIONAL ADMINISTRATOR
77 WEST JACKSON BLVD.
CHICAGO, IL 60604
IS SPILLED MATERIAL TO SOIL OUTSIDE OF FACILITY AND GREATER THAN 55 GALLONS
IMMEDIATELY NOTIFY: NATIONAL RESPONSE CENTER 1-800-424-8802
IDEM EMERGENCY RESPONSE
1-800-388-7745 (IN STATE)
1-317-308-7745 (OUT OF STATE)
ALSO SEE NOTIFICATION REQUIREMENTS OUTLINED UNDER CERCLA HAZARDOUS SUBSTANCE AND SARA EXTREMELY HAZARDOUS SPILL/RELEASE HEADING
WITHIN 10 DAYS OF THE INCIDENT, SUBMIT A WRITTEN SPILL REPORT TO:
U.S.E.P.A. REGION V
REGIONAL ADMINISTRATOR
77 WEST JACKSON BLVD.
CHICAGO, IL 60604
AND
IDEM
OFFICE OF ENVIRONMENTAL RESPONSE
2525 NORTH SHADELAND AVE
PO BOX 6015
INDIANAPOLIS, IN
46206-6015
NOTIFY PLANT MANAGEMENT STAFF:
PAUL FORD
PHONE: 7000
PAGER: 370-000-0107
JOHN THOMAS
PHONE: 7000
MIKE SCALZI
PHONE: 7000
PAGER: 370-0000
MIKE A CREW
GARY HAMILTON
PHONE: 7000
PAGER: 370-0000
BRENT DALTON
PHONE: 7000
PAGER: 370-0000
PROVIDE FOR OUTSIDE SPILL/RELEASE CONTAINMENT AND CLEAN-UP SERVICES
CONTRACTORS :
-CHEMTREC (Heavy Equip. Providers - No Spill Response) 800-424-9300
-SPILL RESPONSE OF INDIANA (Spill Responder) 317-894-0873
-ROBERTSON (Spill Responder) 800-442-4501

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 2.0 CROSS REFERENCE TABLES

40 CFR SECTION	REQUIREMENT	LOCATION IN PLAN
112.1	General Applicability	Section 1.1
112.2	Definitions	Section 4.1
112.3	Requirements for preparation and implementation of SPCC plans	Section 1.1
112.4	Facility and owner information. Plan amendment requirements by Regional Administrator. (Two reportable spills trigger plan submittal with additional information required.)	Section 1.2
112.5	Three year review requirement and PE certification. (Plan amendment requirements by owner. Change in facility design and/or capability to discharge.)	Section 3.1, 3.2 and Section 8.0
112.6	Civil penalties	NA
112.7	Management approval and implementation schedule of times to be installed	Section 3.2
112.7(a)	Written description of historical spills, corrective action taken and prevention.	Section 11.1
112.7(b)	Prediction of flow direction, rate and quantity of oil spilled resulting from equipment failure.	Section 10.0
112.7(c)	Containment (dikes, culverting, weirs, diversion ponds, detention ponds, sorbents, collection systems)	Section 7.1 and Table 1 in Section 9.0
112.7(d)	If lacking containment, then demonstrate impracticability and develop contingency plan	Section 4.0
112.7 (e)(1)(i-iv)	Facility drainage (undiked areas, diversion system)	Section 5.3
112.7 (e)(1)(i)and(e)(2)	Dike drainage (valve types used; inspect accumulated storm water)	Section 7.1
112.7 (e)(2)(i)	Bulk Tanks compatibility (Storage Tank Construction with material stored)	Section 7.1 and Table 1 in Section 9.0
112.7 (e)(2)(ii)	Containment for bulk storage tanks with sufficient freeboard for precipitation. Sufficiently impervious.	Section 7.1 and Table 1
112.7(e)(2)(iii)	Dike Drainage (valves normally closed, inspect storm water, drainage records)	Section 7.1 and Section 7.6
112.7(e)(2)(iv)	Underground Tanks (Cathodic Protection and Pressure Testing)	Section 7.2
112.7(e)(2)(v)	Partially buried tanks	Section 7.2
112.7(e)(2)(vi)	Aboveground tank testing and inspections	Section 7.6
112.7(e)(2)(vii)	Control leakage through heating coils	Section 7.1
112.7(e)(2)(viii)	Fail-safe Engineering (alarms and sensing devices on tank installations)	Section 7.1

SECTION 2.0 CROSS REFERENCE TABLES (CONT.)

40 CFR SECTION	REQUIREMENT	LOCATION IN PLAN
112.7(e)(2)(ix)	Plant effluent discharge inspections	Section 7.6
112.7(e)(2)(x)	Repair visible oil leaks	Section 7.1
112.7(e)(2)(xi)	Portable storage tanks location and use of secondary containment	Section 7.1 and Table 1 in Section 9.0
112.7(e)(3)(i)	Facility transfer operations (Buried pipes)	Section 7.4
112.7(e)(3)(ii)	Pipelines out of service	Section 7.4
112.7(e)(3)(iii)	Pipe supports	Section 7.3
112.7(e)(3)(iv)	Valve and pipe inspections	Section 7.6
112.7(e)(3)(v)	Vehicular traffic	Section 7.7 and Attachment G
112.7(e)(4)(i)	Loading/Unload Procedures meet minimum DOT requirements	Section 7.7 and Attachment G
112.7(e)(4)(ii)	Load/Unload drainage	Section 7.7 and Attachment G
112.7(e)(4)(iii)	Warning signs and physical barrier systems - premature departure	Section 7.7 and Attachment G
112.7(e)(4)(iv)	Vehicle valve(s) inspected for leakage prior to filling and departure	Section 7.7 and Attachment G
112.7(e)(5)	Oil production facilities	Section 7.5
112.7(e)(6)	Oil production facility drainage	Section 7.5
112.7(e)(7)	Oil production and workover facilities	Section 7.5
112.7(e)(8)	Inspection and Records	Section 7.6 and Attachment F
112.7(e)(9)(i)	Security (Fenced site and access gates guarded)	Section 7.9
112.7(e)(9)(ii)	Flow and drain valve position	Section 7.1
112.7(e)(9)(iii)	Starter control for pumps locked or located at site whereby access is limited to authorized personnel	Section 7.1
112.7(e)(9)(iv)	Loading/Unloading connections and pipelines to be capped when not in service	Section 7.7 and Attachment G
112.7(e)(9)(v)	Facility lighting	Section 7.9
112.7(e)(10)(i)	Training to prevent discharge	Section 7.8
112.7(e)(10)(ii)	Person responsible for spill prevention	Section 3.2 and Section 7.8
112.7(e)(10)(iii)	Spill prevention training	Section 7.8
112.20 Appendix C	Certification of the Applicability of the Substantial Harm Criteria	Appendix 1
SPCC Annual Checklist	Checklist requiring annual review of the plan's accuracy	Attachment I
	Oil Storage Capacity Worksheet	Appendix 1
	PCB Addendum	Appendix 2
	Plot Plan	Section 6.0

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 3.0 CERTIFICATIONS

3.1 SPCC CERTIFICATION

I have reviewed the Release Plan for GM Bedford. The facility has been examined and being familiar with the provisions of Title 40 - Protection of the Environment, Chapter I - Environmental Protection Agency, Subchapter D, - Water Programs, Part 112 - Oil Pollution Prevention, as first published in 38 FR 34165, December 11, 1973 and amended in 57 FR 52704, November 4, 1992, I certify that to the best of my knowledge that the SPCC portion of this plan has been prepared in accordance with good engineering practices.

Name: William Schoonmaker

Title: Regional Environmental Manager

Signature: Wm Schoonmaker

Date: 1-17-01

Registration Number: 18452

State: IN



GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 3.0 CERTIFICATIONS

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Name: William Schoonmaker

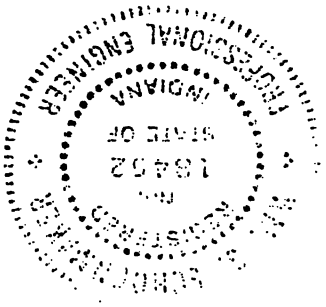
Title: Regional Environmental Manager

Signature: Wm Schoonmaker

Date: 1-19-00

Registration Number: 18452

State: IN



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BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
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Name: William Schoonmaker

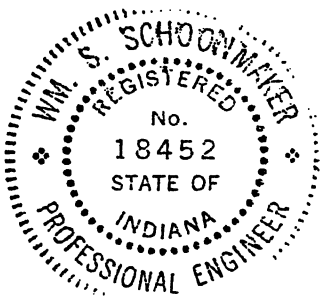
Title: Regional Environmental Manager

Signature: Wm. Schoonmaker

Date: 3-7-99

Registration Number: 18452

State: IN



GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 3.0 CERTIFICATIONS

3.1 SPCC CERTIFICATION

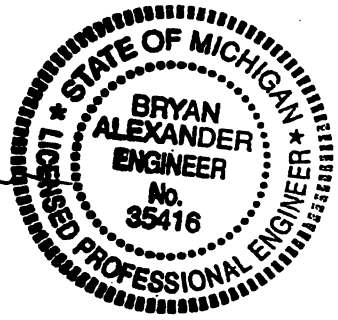
I have reviewed the Release Plan for GM Bedford. The facility has been examined and being familiar with the provisions of Title 40 - Protection of the Environment, Chapter I - Environmental Protection Agency, Subchapter D, - Water Programs, Part 112 - Oil Pollution Prevention, as first published in 38 FR 34165, December 11, 1973 and amended in 57 FR 52704, November 4, 1992, I certify that to the best of my knowledge that the SPCC portion of this plan has been prepared in accordance with good engineering practices.

Name: Bryan Alexander

Title: Senior Project Manager

Signature: Bryan Alexander

Date: NOV 21, 1998



Registration Number: 35416

State: MI

3.2 MANAGEMENT CERTIFICATION

I have reviewed the Release Plan for GM Bedford. The plan is approved and supported by the management team of this facility. The plan will be implemented and followed as herein described. The facility personnel identified as emergency coordinator(s) have the authority to commit resources as may be required to protect public health and safety and/or the environment.

Name: John Thomas

Title: Plant Manager

Signature: John Thomas

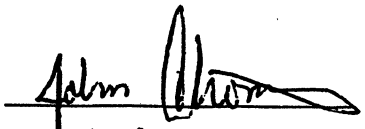
Date: 1-17-2001

3.2 MANAGEMENT CERTIFICATION

I have reviewed the Release Plan for GM Bedford. The plan is approved and supported by the management team of this facility. The plan will be implemented and followed as herein described. The facility personnel identified as emergency coordinator(s) have the authority to commit resources as may be required to protect public health and safety and/or the environment.

Name: John Thomas

Title: Plant Manager

Signature: 

Date: 1-19-00

3.2 MANAGEMENT CERTIFICATION

I have reviewed the Release Plan for GM Bedford. The plan is approved and supported by the management team of this facility. The plan will be implemented and followed as herein described. The facility personnel identified as emergency coordinator(s) have the authority to commit resources as may be required to protect public health and safety and/or the environment.

Name: John Thomas

Title: Plant Manager

Signature: John Thomas

Date: 3.8.99

3.2 MANAGEMENT CERTIFICATION

I have reviewed the Release Plan for GM Bedford. The plan is approved and supported by the management team of this facility. The plan will be implemented and followed as herein described. The facility personnel identified as emergency coordinator(s) have the authority to commit resources as may be required to protect public health and safety and/or the environment.

Name: John Thomas

Title: Plant Manager

Signature: John Thomas

Date: 11-25-98

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 4.0 SPILL RESPONSE PROCEDURES

4.1 INITIAL DISCOVERY ACTIONS

GM Bedford has developed procedures to be followed in order to minimize the potential for an unintentional release of oil, hazardous substance or objectionable substance. In the event of a spill, procedures have been written for the notification of and response to spills.

Definition of Spill

Spill event, as defined by 40 CFR Part 110, means a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities.

Spill, as defined by Indiana Regulation IAC2-6.1, means any unexpected, unintended, abnormal, or unapproved dumping, leakage, drainage, seepage, discharge or other loss of petroleum, hazardous substances, extremely hazardous substances, or objectionable substances. The term does not include releases to impermeable surfaces when the substance does not migrate off the surface or penetrate the surface and enter the soil.

Spill Containment and Cleanup

The first action to be taken in the event of any kind of pollutant spill that could threaten human health or the environment is to initiate the in-plant emergency notification system by contacting plant security (see Internal/External Notification Tab at the beginning of this plan). Personnel on the in-plant spill response team can assess the spill and determine if outside assistance will be necessary. The main goal of the internal and external spill responders is to contain the spill until cleanup can occur. Incidental spills are to be addressed by departmental supervision.

In the event the spill cannot be contained within the confines of the plant boundaries, immediate action must be taken to procure all necessary materials and equipment to confine and cleanup the spill.

Notification of adjacent property owners must be carried out if the spill shows evidence of entering their property. The Emergency Coordinator or designated alternate will make the notification (refer to page 4-3).

4.2 INITIAL RESPONSE ACTIONS

4.2.1 In Plant Releases

Incidental in-plant spills are the responsibility of the operating department where found. In-plant spills can be contained using sand, dirt, or oil-dry as dam material or absorbent depending on the material spilled. In extreme emergencies, oil can be contained with productive powdered materials, such as clays, cement, etc., although the use of these is not recommended for this purpose. However, if a spill is beyond the means of the operating department, notification to plant security will be made immediately.

Spills, which occur on paved surfaces within plant perimeters can be treated as incidental spills, if the material is known, and does not pose a threat to human health or the environment. However, if the spill occurs on dirt, near a sewer or waterway, plant security must be notified of the spill, regardless of the material. See Internal Notifications on the pink paper in the beginning of the plan.

4.2.2 Releases External to Facility

Immediately notify plant security. Plant Security will initiate the Internal Notifications according to the flow chart at the beginning of this plan by calling Maintenance, the Emergency Coordinator, and Health and Safety. For further notifications refer to the flowchart in the beginning of the plan.

4.2.3 Discovery of Releases by Non-GM personnel

An outside call regarding a spill can come from any outside source and may be received by anyone on the inside of the plant. The notification may not relate to the plant. It is important that the proper information be obtained from the caller, so the proper action can be initiated. When such a notification is received, the following information should be requested:

- Where is the spill?
- Can you identify the materials?
- What does it look like?
- When did you observe it?
- Will you identify yourself, (name and address) so that we can report on the results of your investigation?
- Can we contact you for further assistance if we cannot locate the spill?

The person taking spill information from outside the plant will follow the Internal Notification procedure on the pink paper in the beginning of the plan.

4.3 INTERNAL NOTIFICATIONS

Immediately upon discovery of a pollutant spill, personnel shall contact Plant Security at ext. 7333. Information to be supplied should include:

- Building or location
- Floor or column
- Type of emergency
- Extent and nature of injury
- Time and duration of spill
- Source of spill
- Identification and quantity of substance
- Extent of actual and potential environmental pollution
- Extent of property damage
- Remedial action taken

If reported by non-GM personnel, include information from the previous Section 4.2.3.

The information collected by Plant Security will be forwarded to a Maintenance Supervisor, the Emergency Coordinator, and Health and Safety, in that order. The appropriate Maintenance Supervisors are listed on the pink, Internal Notification Flowchart at the beginning of this plan. The Emergency Coordinator and Health and Safety contacts are as follows:

EMERGENCY COORDINATOR

	Plant	Pager*	Home
Kim Dobosenski Environmental Engineer	7404	9-278-2893*	(812) 332-5088**

HEALTH & SAFETY CONTACT - ALTERNATE EMERGENCY COORDINATORS

Eric Prenevau Health & Safety Director	7216	9-278-2130*	(812) 330-9149**
Eva Smith Training Coordinator	7261	9-278-2013*	9-279-3260

Maintenance supervisors indicated on the Internal Notification Flowchart can also act as alternate coordinators. Please reference the pink flowchart at the beginning of the plan.

*** The numerical message sent to a pager should be preceded by the "911" code to indicate an emergency situation.**
**** Before each home number, outside the local calling area, dial 8-1-812 then the number.**

4.4 MANPOWER ASSIGNMENTS

In the event of a spill or release, Plant Security will contact Maintenance, the Emergency Coordinator, and Health & Safety, in accordance with the pink, Internal Notification Flowchart at the beginning of this plan. One or more of these individuals will assess the spill from a distance and determine the extent of the spill. If the spill is an incidental release of an oil or a hazardous substances and if the substance can be absorbed, neutralized or otherwise controlled at the time of release, employees in the immediate area or maintenance personnel will clean up the spill. If the spill can not be handled by maintenance, outside contractors will be called in to respond to the spill. If reportable quantities of a substance, or if oil reaches a waterway, the Emergency Coordinator, or designate, will contact the appropriate agencies. Refer to the External Notification Flowchart and Section 4.7 for appropriate responses.

In the case of a fire, a fire brigade consisting of maintenance, security and supervisory personnel is present at the facility. A completely equipped medical department staffed 24 hours a day (except weekends) is available on-site.

4.5 RESPONSIBILITIES

1. Management Employees

   Perform emergency first aid as required and by the Medical Department. Maintain liaison with outside medical facilities.

   Maintain liaison with all staffs throughout the disaster. Assist in clearing non-essential personnel from the disaster area. Disseminate information to Corporate Staff as required by Corporate Procedures.

   Control and direct the movement of personnel and stock, maintain order, assist fire department personnel. In addition, arrange to transport the injured to emergency medical facilities.

2. Security Department Employees

   Deploy security personnel as directed by the Security Chief and/or Plant Management as requirements dictate throughout the emergency.

   Security Employees will assist in helping employees evacuate as directed by Plant Management.

3. Fire Brigade

   Fire Brigade personnel will assist in helping with Emergency Procedures under direction of Plant Management.

4. Safety Personnel Responsibilities

   Assist as directed by Plant Management.

4.6 COMMAND CENTER

The Safety Conference Room will serve as the Emergency Command Center. In the event that this location is blocked due to the disaster or when evacuation becomes necessary, the Medical Conference Room will serve as the alternate command post.

4.7 EXTERNAL NOTIFICATIONS (ENVIRONMENTAL DEPARTMENT USE ONLY)

The new rule definition of "spill" excludes releases to impermeable surfaces. Therefore, the reporting of spills on interior floors in production areas or on paved driveways and parking lots without drains may not be required, as long as the spill does not migrate off the surface or penetrate the surface and enter the soil.

Only spills of certain quantities, locations, and chemical types need to be reported. Different reporting thresholds apply if the spill is to water or soil and within the facility property boundary versus beyond its boundaries. Regardless of these criteria, the spill must be reported if it will damage waters of the state as to cause death, acute injury, or illness to humans or animals, as stated in the Indiana regulations.

An external notification reporting flow chart, included in the beginning of the plan, summarizes the external reporting that is applicable to the Bedford facility.

4.7.1 State Notifications (Environmental Department Use Only)

The following evaluations of a spill must be performed to determine if the spill is reportable in accordance with Indiana State regulation 327 IAC 2-6.1. A reportable quantity (RQ) table is included as Attachment A.

1. If spill is to surface water, the Environmental Department must report:
   - Spills of hazardous substances or extremely hazardous substances greater than 100 pounds or the RQ, whichever is less.
   - Spills of petroleum which cause a sheen.
   - Spills of objectionable substances.
2. If spill is to soil beyond the facility boundary, the Environmental Department must report:

- Spills of hazardous substances or extremely hazardous substances greater than 100 pounds or the RQ, whichever is less.
- Spills of petroleum greater than 55 gallons.
- Spills of objectionable substances.

3. If spill is to soil and within the facility boundary the Environmental Department must report:

- Spills of hazardous substances or extremely hazardous substances greater than RQ.
- Spills of petroleum greater than 1000 gallons.
- Spills of objectionable substances that damage waters of the state or harm public health.

4. Any spill for which a spill response has not been done.

The following actions must be taken by the Environmental Department for reportable spills:

Call IDEM Emergency Response as soon as possible, but at least within 2 hours of the spill at 1-888-233-7745 (in state) or 317-233-7745 (out of state). Notifications will be performed by the Environmental Department or the designated alternates. This initial notification can be made by telephone, radio or in person.

The notification should contain the eight items of information identified below. Notification **SHOULD NOT** be needlessly delayed if all of the following information is not available and an RQ is potentially exceeded:

- The chemical name or identity of any substance involved in the release.
- Whether the substance is listed as a Section 302 extremely hazardous substance.
- Estimated quantity of the released substance.
- Time and duration of the release.
- Whether the release occurred into the air, water, and/or land.
- Known or anticipated chronic or acute health risks associated with the emergency and advise regarding medical attention for exposed individuals.
- Precautions, such as evacuation, taken to respond to the release.
- Name and telephone number of the Environmental Engineer, Kim Dobosenski (812) 279-7404.

Submit a written report if required by IDEM (refer to section 4.11). Use the form letter in Attachment B as an example. Submit letter to:

Department of Environmental Management
Office of Environmental Response
2525 North Shadeland Ave.
PO Box 6015
Indianapolis, IN 46206-6015

Exercise due diligence and document attempts to notify the nearest downstream water user within 10 miles for surface spills that cause damage or effect property owners, operators or occupants for soil spills beyond the property.

At this time, there are no current downstream water users within 10 miles of the Bedford facility.

4.7.2 Federal Notifications (Environmental Department Use Only)

The following notifications will be performed to meet federal requirements.

Hazardous Substances

A spill must be reported if it is a regulated substance which has been spilled/released in excess of certain Reportable Quantities (RQ). The notification requirements are as follows:

- Any person in charge of the facility shall, as soon as he has knowledge of any release of a hazardous substance in a quantity greater than or equal to the RQ over a 24 hour period must notify the:

  National Response Center 1-800-424-8802

- If the chemical is a mixture, the amounts of the various components must be compared to the RQ to determine if the spill is reportable.

Petroleum Products

If a spill of petroleum causes a sheen on the navigable waters of the United States, the National Response Center must be contacted.

The following information should be provided:

- The name and title of the person making the report.
- The name and estimated amount of the substance released into the environment.
- Where the release took place.
- To what media of the environment the release escaped.

- Remedial actions taken to control or mitigate the release's effects.

If required, submit a written report to the National Response Center. Refer to Attachment B for an example of a form letter to the Response Center.

4.7.3 Miscellaneous Notifications (Environmental Department Use Only)

A spill that enters sanitary sewer lines may effect city sewage treatment facilities. Such a spill must be reported to the city at the Sewage Disposal Plant at (812) 275-4901.

Additional external spill notification will include the following:

Ms. Midge Winkler
Operations Support Environmental Services
MC 482-302-205
485 W. Milwaukee
Detroit, MI 48202
Office Phone: (313) 556-1931
GM Network Phone: 8-346-1931

Ms. Laura L. Fitzpatrick
Environmental and Energy Practice Area
Legal Staff
MC 482-C24-D24
300 Renaissance Center
P.O. Box 300
Detroit, MI 48265-3000
Office Phone (313) 665-4881
GM Network Phone: 8-225-4881

Exclusions

The reporting requirements of the rule do not apply to the following:

- Discharges or exceedances that are under the jurisdiction of an applicable permit when the substance discharged is covered by the permit and death or acute injury or illness to animals or humans does not occur.
- Lawful application of materials including, but not limited to, fertilizers and pesticides on or to land or water, dust suppression materials or the application of petroleum necessary for road construction.
- Spills of less than 1 pound or 1 pint.
- Spills of integral operating fluids in the use of motor vehicles or other equipment, the total volume of which is less than 55 gallons and which do not damage the waters of the state.

- A release of a substance integral to a spill response activity that has been approved and authorized by a state or federal on-scene coordinator.

In the event of a death or significant accident, personnel will follow the Safe Job Operating Procedures.

4.8 CLEAN-UP CONTRACTORS

Arrangements have been made with the following contractors to assist with emergency response.

McIntyre Brothers Construction
1020 Seventh Street
Bedford, IN 47421
(812) 275-5956

Spill Recovery of Indiana
10635 US Highway 136
Indianapolis, IN 46234
(317) 291-3972

Koester Environmental Services Inc.
14649 Highway 41 North
Evansville, IN 47711
(812) 867-0100

Written documentation of the arrangements that the Bedford plant has with clean-up contractors are on file with the Environmental Department.

4.9 SPILL RESPONSE EQUIPMENT

The following spill control and cleanup equipment is available at the plant:

A 300 gallon fluid collection system (Scrubber Vac) and tractor with a backhoe are available through the Maintenance Department. Oil absorption material is available from the old A-Crib area which is located on the southeast section of the Die Cast Building. Spill kits are available at the Fire Brigade Area, the Bulk Storage Area, Wastewater Treatment and the Paint Booth. Additional booms and absorbent pillows are also available at the wastewater treatment plant.

The following is a list of items in the spill kits:

(Paint Booth, Wastewater Treatment Plant, and Bulk Storage Spill Kits)

- 12-3" X 46" HAZ-MAT Socks
- 6-3" X 10' HAZ-MAT Socks
- 2 – 10' Dikes
- 7-16" X 17" Pillows
- 75-Mat Pads
- 10 Temporary Disposal Bags & Ties

(Fire Brigade Area Large Response Cart)

- 14-3" X 46" HAZ-MAT Socks
- 3-3" X 10' HAZ-MAT Socks
- 2 – 10' Dikes
- 7-16" X 17" Pillows
- 2-5 lb. Bags of Pulp
- 100-Mat double-weight Pads
- 15 Temporary Disposal Bags & Ties

Note: Shovels are also available in the area near the Spill Kit.

The following is a list of items on the fire wagon and equipment cart:

- Shovel
- 1 Axes
- City adapter
- Gloves 1 dozen
- 100 ft. rope
- 2 helmets

- Megaphone
- 2 crow bars

The following is a list of the supplies for Blood Borne Pathogens exposure and the locations of the cabinets:

Locations of cabinets

#1 Die Cast North in the aisle

#2 Pistons by heat treat oven by supervisors desk.

#3 Tool Room hallway by supervisor desk.

#4 Die Cast South behind scale.

#5 Maintenance office wall outside.

#6 Melting going west wall of melting office.

Supplies

- 5 Personal Protective Kits that contain Head covers, masks, gowns, shoe covers, red biohazard bags, paper towels, antiseptic wipes and rubber gloves.
- 5 Small spill kits that contain Red biohazard bags, rubber gloves, antiseptic wipes.
- 5 large spill kits 2 Red biohazard bags, paper towels, antiseptic wipes, many rubber gloves.
- CPR biohazard bags, antiseptic wipes, one-way breathing mask, sterile 4X4's and rubber gloves.

- A release of a substance integral to a spill response activity that has been approved and authorized by a state or federal on-scene coordinator.

In the event of a death or significant accident, personnel will follow the Safe Job Operating Procedures.

4.8 CLEAN-UP CONTRACTORS

Arrangements have been made with the following contractors to assist with emergency response.

McIntyre Brothers Construction
1020 Seventh Street
Bedford, IN 47421
(812) 275-5956

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10635 US Highway 136
Indianapolis, IN 46234
(317) 291-3972

Koester Environmental Services Inc.
14649 Highway 41 North
Evansville, IN 47711
(812) 867-0100

Written documentation of the arrangements that the Bedford plant has with clean-up contractors are on file with the Environmental Manager.

4.9 SPILL RESPONSE EQUIPMENT

The following spill control and cleanup equipment is available at the plant:

A 300 gallon fluid collection system (Scrubber Vac) and tractor with a backhoe are available through the Maintenance Department. Oil absorption material is available from the old A-Crib area which is located on the southeast section of the Die Cast Building. Spill kits are available at the Fire Brigade Area, the Bulk Storage Area and the Paint Booth. Booms and absorbent pillows are also available at the wastewater treatment plant.

The following is a list of items in the spill kits:

(The Fire Brigade and the Paint Booth spill kits)

- 12-3" X 46" HAZ-MAT Socks

- 6-3" X 10' HAZ-MAT Socks
- 7-16" X 17" Pillows
- 1-5 lb Bag of Pulp
- 10 Temporary Disposal Bags & Ties
- 10 Pair Package of Gloves

Note: Shovels are also available in the area near the Spill Kits.

(The Bulk Storage Spill Kit)

- 16-3" X 48" HAZ-MAT Socks
- 10-3" X 10' HAZ-MAT Socks
- 60-16 1/2" X 20" Mat double-weight Pads
- 8-17" X 21" Pillows
- 20-KIMTEX Wipers
- 10 Temporary Disposal Bags & Ties
- 6 Tamper Proof Labels

The following is a list of items on the fire wagon and equipment cart:

- Shovel
- 2 Axes
- City adapter
- Gloves 1 dozen
- Foam applicator
- 5 Boots
- 7 Air tanks
- 100 ft. rope
- Extension cord
- Shop towels
- 2 Scott Air Packets
- 10 helmets

- Megaphone
- 2 crow bars
- Rubber gloves

The following is a list of items on the confined space carts:

- 2 Scott Air Packs
- Tripods
- Rope
- 2 Life Lines (50 and 100 feet)
- 2 Pulleys
- Crank

The following is a list of the supplies for Blood Borne Pathogens exposure and the locations of the cabinets:

Locations of cabinets

#1 Die Cast North in the aisle

#2 Pistons by heat treat oven by supervisors desk.

#3 Tool Room hallway by supervisor desk.

#4 Die Cast South behind scale.

#5 Maintenance office wall outside.

#6 Melting going west wall of melting office.

Supplies

- 5 Personal Protective Kits that contain Head covers, masks, gowns, shoe covers, red biohazard bags, paper towels, antiseptic wipes and rubber gloves.
- 5 Small spill kits that contain Red biohazard bags, rubber gloves, antiseptic wipes.
- 5 large spill kits 2 Red biohazard bags, paper towels, antiseptic wipes, many rubber gloves.
- CPR biohazard bags, antiseptic wipes, one-way breathing mask, sterile 4X4's and rubber gloves.

4.10 SPILL DOCUMENTATION

Following the release or spill at the facility, the Environmental Department will ensure the incident and the response actions taken to address it are documented. Attachment C contains the Internal and External Spill / Release Report forms that may be used in the event of a spill / release.

4.11 WRITTEN NOTIFICATION REQUIREMENTS

State Written Notification Requirements

For spills of hazardous materials or petroleum products that are reported under Section 4.7 - External Notifications, the IDEM may require a written report. If a report is required, the format in Attachment B, shall be followed. The report will be submitted to:

Department of Environmental Management
Office of Environmental Response
2525 North Shadeland Ave.
PO Box 6015
Indianapolis, IN 46206-6015

The report will be prepared, signed and submitted by the Environmental Department. Prior to submittal, GM Worldwide Facilities Environmental Staff and Legal Department shall review the report.

Federal Written Notification Requirements

For spills of petroleum products that are greater than 1,000 gallons or if the second reportable spill within 12 months, a report must be submitted to US EPA Region V within 60 days of the release (see Attachment B for an example). Also, for spills of RCRA hazardous waste, a report will be required to be submitted within 15 days of the release.

US EPA Region V
Regional Administrator
77 West Jackson Blvd.
Chicago, IL 60604

The report will be prepared, signed and submitted by the Environmental Department. Prior to submittal, GM Worldwide Facilities Environmental Staff and Legal Department shall review the report within 10 days of the release.

Any spill that violates the plant NPDES Permit Limitations require that a detailed written report be submitted to the EPA Regional Administrator and the State of Indiana within five (5) days after becoming aware of such condition. See plant NPDES permit for reporting requirements. GM Legal Department must approve all written reports before submittal.

4.12 SPILL CLEANUP AND TERMINATION OF ACTIVITIES

The Emergency Coordinator or Alternate Coordinator will coordinate the necessary resources to ensure the cleanup of the affected area.

The Environmental Department or designee will ensure that the released material, cleanup material and personal protective equipment will be disposed of in a GM approved disposal facility. Storage and disposal of materials generated from a spill response shall be performed in accordance with GM procedures 5533-18 (Storage and Disposal of Waste Fluids and Oils) and 5533-28 (Disposal of Solid Waste). The most current revision of these procedures may be obtained from the Quality Department or the shared "S" drive (S:\QS9000sn\), which is available on most computers in the facility. Attachment D also contains copies of these procedures, but before using them the user must verify that they are current by referencing the Master List of Plant Procedures.

4.13 PUBLIC RELATIONS

In the event that public relations are affected by a release, facility personnel will follow the guidelines included in the Bedford Disaster Plan. The guidelines are included as Attachment E of this manual.

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 5.0 SITE DESCRIPTION

5.1 DESCRIPTION OF OPERATIONS

The GM Bedford plant is a manufacturer of automotive aluminum castings including transmission cases and pistons. The processes to produce these products include die casting and permanent molding.

The plant is located outside of any flood area. This is based on information obtained from the U.S. Geological Survey Maps for the Bedford area and from the U.S. Department of Agriculture, Soil Conservation Office. The U.S. G.S. maps show that the plant is located at an evaluation of 720 feet above sea level, which is well above the 100 year flood level for the White River and Pleasant Run Creek area flood levels of 510 feet.

5.2 LOCATION MAP

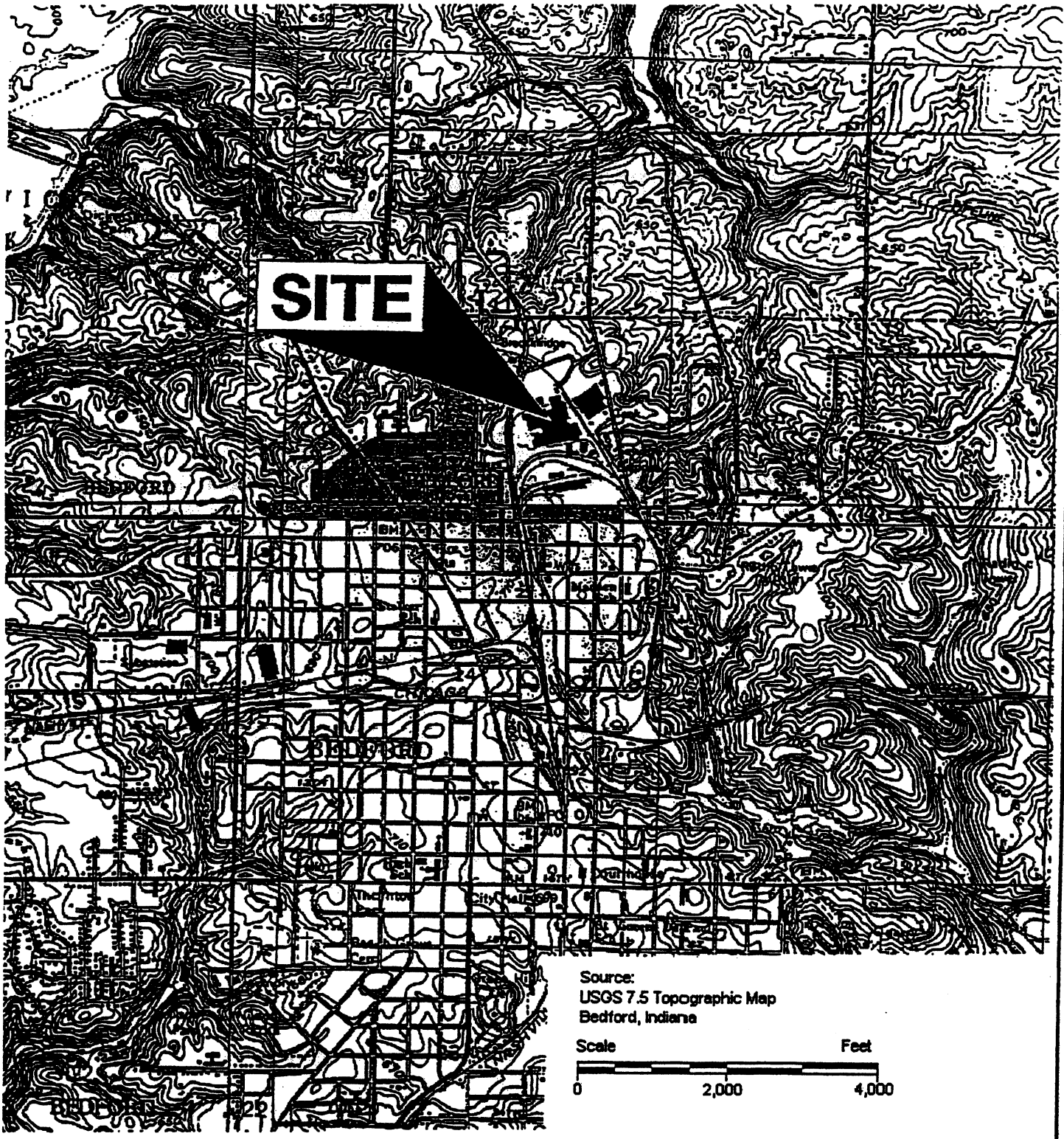
A location map is included on the next page.

5.3 MAJOR STREAMS/SEWERS

The facility storm water is collected and contained within the on-site storm water retention lagoon. The water is used for fire protection and as makeup process water.

Emergency overflow from the facility storm water retention lagoon is discharged via NPDES-003 to an unnamed ditch which flows into the Bailey Branch of Pleasant Run Creek located east of the facility.

Facility sanitary wastewater is discharged to the City of Bedford sanitary sewer system. Facility process wastewater and stormwater is collected and treated in the on-site wastewater treatment plant. Approximately 85% of the treated effluent is reused as process water. The remaining 15% is discharged through NPDES-002 Outfall to an unnamed ditch which flows into the Bailey Branch of Pleasant Run Creek.



CHESTER ENGINEERS			PROJECT NO.: 3162-08	**General Motors Corporation** **Bedford Plant** **Bedford, Indiana**
N BY:	CHK'D BY:	SCALE: As Shown	FIGURE NO.:	
R BY:	DATE: 07/21/98	FILE NAME:	Figure 1	Facility Location Map

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 6.0 FACILITY MAP

A copy of a Facility Map showing runoff direction, storm and sanitary sewers follows this page. Also, an insert of the Bulk Product/Waste Storage Area is included. The numbering system on the drawings refers to the Material Storage Table in Section 9.0. A condensed copy of the table is included in this section.

Legend 1 - Material Storage

Oils & Fuels

Tank Number	Material Description	General Location
A-1	Waste Hydraulic Fluid	Outside of Secondary Building
A-2	Gasoline	Piston Loading Area
A-3	Diesel Fuel	Piston Loading Area
A-4	Water Glycol	Old A-Crib Area
A-5	PCB	Drum Storage Area
A-6	Gulf Cut Oil	Receiving
A-7	Various Oils	Oil House
A-8	Lube Oil	Tool Room
A-9	Waste/Used Oil	Tool Room
A-10	Way Lubricant	Recieving
A-11	Oil	Die Cast South
A-12	Oil	Die Cast South
A-13	Oil Tank	Storm Lagoon
PU-14	Skim Oil Tank	Outside of Secondary Building

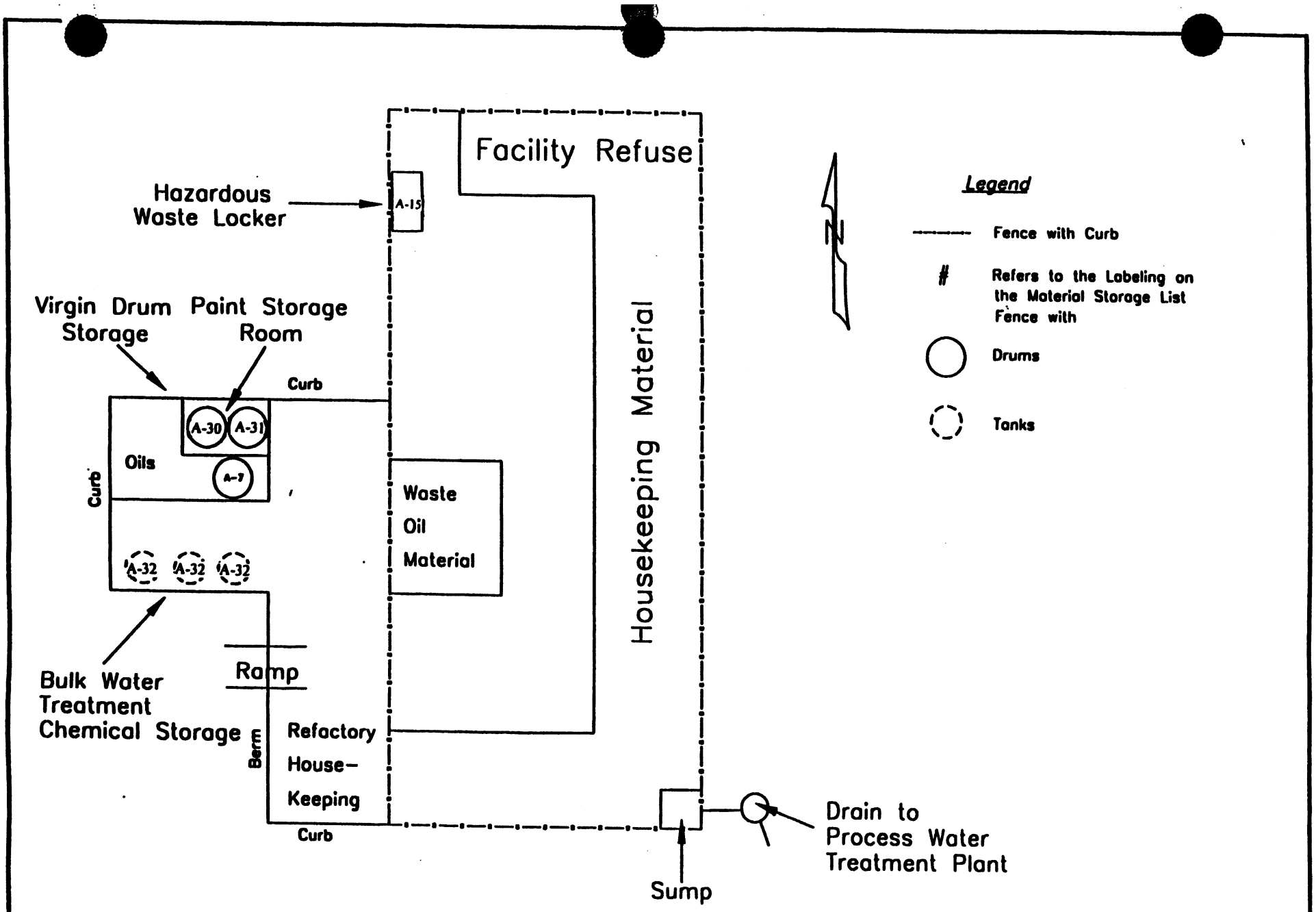
Hazardous Waste

Tank Number	Material Description	General Location
A-15	Waste Paint Solvent	Drum Storage Area

Chemicals

Tank Number	Material Description	General Location
A-16	Urea	Secondary Building
A-17	Polymer Mix Tank	Secondary Building
A-18	Polymer Neat Tank	Secondary Building
A-19	HCl	Outside Filter Building
A-20	Sodium Hypochlorite	Filter Building
A-21	Sodium Chlorite	Filter Building
A-22	Corrosion Inhibitor	Filter Building
A-23	Ferric Sulfate	Sludge Building
A-24	Primary/Secondary Sludge	Sludge Building
A-25	Holding Sludge Tank	Sludge Building
A-26	Contact Tank	Sludge Building
A-27	Filterate Storage Tank	Sludge Building
A-28	Lime Slurry Tank	Sludge Building
A-29	Alum	Aeration Building
A-30	Paint Thinner	Drum Storage Area
A-31	Lacquer	Drum Storage Area
A-32	Corrosion Inhibitor	Drum Storage Area
A-33	Sodium Hypochlorite	Powerhouse
A-34	Water Treatment Chemicals	Powerhouse
A-35	Anti Foam	South Die Cast
A-36	Sodium Hypochlorite	South Die Cast

A- Aboveground
PU - Partially Underground



FILE NAME	SCALE	DATE
316208W.dwg	None	11/19/98

DWG NO.: Figure 2

General Motors Corporation
Bedford Plant
Bedford, Indiana
Bulk Product/Waste Storage Area

CHESTER ENGINEERS

DWN BY:	CHK'D BY	APPR BY

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 7.0 POLLUTION PREVENTION

7.1 OILS, HAZARDOUS MATERIAL AND HAZARDOUS WASTE STORAGE

Prevention and countermeasures are required for the handling and storage of:

1. Oils, fuels, and other hydrocarbons, and
2. The accumulation, storage, and shipping of hazardous wastes.

The following countermeasures are discussed to fulfill the requirements of 40 CFR 112.7 (e).

- Each aboveground petroleum tank is of steel construction and is compatible with the oils they contain and conditions of storage.
- All the aboveground tanks along with containment capacities are discussed below by tank location. Also the information is summarized in Table 1 Section 9.0.
- None of the dikes at GM Bedford use valves for drainage. The dikes are pumped out or flow to the WWTP as described below.
- None of the petroleum tanks have internal heating coils.
- No high level alarms are employed.
- The tanks are not equipped with level gauges unless otherwise stated below.
- There are no starter control locks on the petroleum tanks.

Following is a detailed description of the materials handled and the countermeasures used at GM Bedford. The materials are organized by location and are also located on the facility map.

Secondary Building

Fifty pound dry bags of urea are stored in the Secondary Building. The urea is mixed in a 300 gallon tank and the building acts as containment. There are also two polymer tanks. One tank is a 300 gallon mix tank and the other is 1,200 gallon neat tank. Both tanks are

diked with 150% containment. Outside, to the north of the building is a 1,500 gallon waste hydraulic fluid tank. The tank is set within a masonry diked area which holds greater than 150% of the tank. No sump exists in the dike.

Filter Building

The filter building holds three 1,500 gallon PVC tanks. Two of the tanks, Drew 6110 Sodium Hypochlorite and Drew CHLOR 4107 Sodium Chlorite, are within the same dike with 150% of the largest tank contained. The third tank holds corrosion inhibitor and is 150% contained. If necessary, the dike can be drained to the process sewer. All the fill pipes are within the containment and level indicators are on the tanks. An eye wash station is located across from the tanks. Outside on the south end of the building is a 1,500 gallon HCl tank. The area has a PVC dike which holds 150% of the tank. The containment area is covered. Just outside of the dike is a sewer that drains to the wastewater treatment plant.

Sludge Building and Surrounding Area

Two 1 million gallon tanks holding primary sludge and secondary sludge are located outside of the sludge building. An earthen dike is used to contain the tanks and there are no level indicators on the tanks. A 5,800 gallon PVC Ferric Sulfate tank is located inside the sludge building. This tank is approximately 115% contained. The fill pipes for the tank are located outside. The dike has a blind sump and is pumped out manually. A sludge tank with capacity of 10,000 gallons, a contact tank with capacity of approximately 5,000 gallons and a filtrate storage tank with capacity of approximately 2,500 gallons are also located within the sludge building. The building itself drains to the surge basin and then to the aeration basin.

Aeration Building

Two alum tanks are located inside of the aeration building. Each tank is 2,000 gallons in size and constructed of PVC. The tanks are diked with greater than 150% containment.

Piston Loading Area

Located outside on the pavement are two enclosed (tank within a tank) fuel tanks. One is a 1,000 gallon gasoline tank. The other is a 1,000 gallon diesel fuel tank. A level stick is used to determine the volume of fuel. Leaks from the gasoline or diesel hose are repaired and cleaned up immediately. If a spill occurs during unloading, the fuel will flow to a catch basin and be contained in the storm water retention lagoon.

Old A-Crib Area

Two 5,000 gallon steel water glycol tanks are stored in the old A-Crib area. The tanks are suspended in the air without containment. If there is a leak the water glycol will flow out the door and will drain through the storm sewer to the lift station where it can be contained.

Drum Storage

There is an oil house located within the drum storage area capable of handling forty drums. Drums of various types of oil are stored in the oil house under cover. Part of the oil house is divided into a storage area for paint products. Fifty-five gallon drums of paint thinner and lacquer are also stored within this area.

Three 15,000 gallon tanks are located on the south side of the oil house. These tanks are located outside and contain Drewsperse 737, Dresperse 2625A, and Drewgard 120 all corrosion inhibitors. The tanks are foam insulated.

The entire drum storage area is contained along with the waste management area. A sump located in the waste management area drains to the WWTP.

Waste Management Area

The 90 day accumulation area is located within the waste management area. The only hazardous wastes on-site (waste paint solvents) are stored in the accumulation area. The solvents are stored in a metal, enclosed, fire resistant cabinet.

The whole waste management area is contained along with the drum storage. There is a sump, on the north east corner of the containment area that drains to the WWTP.

A fence surrounds the waste management area and the Resource Manager has an office stationed within the area. A phone is available along with a ABC fire extinguisher, spill kit and non-spark shovel.

Tool Room Oil Area

Approximately twelve totes containing oil lube and twenty drums containing waste/used oil are located in the tool room. The building acts as containment. An ABC fire extinguisher is located on a column near the waste/used oil.

Maintenance Oil Areas

There are two central locations where Maintenance personnel store oil in the facility. The locations are in the Die Cast and Piston Buildings. Each location has a 350 gallon tote and approximately 12 fifty-five gallon drums.

Receiving Area

Approximately, four Gulf Cut lubricants totes (~350 gallons/tote) and two way lubricants totes (~360 gallons/tote) are located in the receiving area. The Gulf Cut totes are moved to the process area when needed. Other miscellaneous chemicals may also be stored in receiving. The totes are stored along the wall out of the way of traffic. If a spill occurs and travels out of the building the oil will end up in the storm lagoon. In case of a fire, an ABC fire extinguisher is available in the receiving area.

Powerhouse Chemical Storage

Bleach and other boiler feed chemicals are stored within the powerhouse.

South Die Cast

Dispersant and sodium hypochlorite are stored within the South Die Cast area. Oil may also be stored at this site.

Storm Lagoon

One oil tank, with a capacity of approximately 290 gallons, is located in the storm water pump building next to the storm lagoon. The tank is diked with approximately 120% containment.

7.2 UNDERGROUND AND PARTIALLY BURIED TANKS

The Bedford Facility has no underground storage tanks. At the wastewater treatment plant, a skimmed oil in process transfer tank is partially below grade.

7.3 OVERHEAD PIPING

No petroleum products are pumped overhead, therefore valve and pipe inspections are not required.

7.4 OUT OF SERVICE INSTALLATIONS

The facility has an extensive network of buried piping at the wastewater treatment plant. There are no provisions for corrosion protection of this piping.

There are no out of service installations at the facility that have not already been removed.

7.5 OIL PRODUCTION FACILITY REQUIREMENTS

This facility is not an oil production facility, therefore, this requirement is not addressed.

7.6 INSPECTIONS

A GM Bedford inspection of the waste management area is conducted weekly along with the waste paint accumulation area and the 90 day accumulation area. If any problems are found they must be explained in the records and followed with a plan for corrective action. The inspection forms are filed with the Resource Manager and kept for a minimum of five years.

The petroleum tanks are checked weekly for tank damage or leakage. The inspection forms are filed by Security, for the tank at the storm lagoon, and by the Resource Manager, for the other two petroleum tanks located between the Piston & Die Cast Buildings.

The influent to the wastewater treatment plant is observed daily by wastewater treatment personnel. In addition to the visual observations of the influent, personnel perform analytical tests on the influent and effluent to identify potential problems with the manufacturing and/or WWTP operations. Other analytical tests may be sent to an outside lab.

Wastewater treatment personnel also inspect the influent points to the storm water retention lagoon, its effluent point and the outfall once a week. Any unusual observations or potential problems can be noted on the inspection sheets. Inspection forms are kept in the office of the wastewater treatment plant operator. Copies of inspections are kept on file for a minimum of five years.

Refer to Attachment F for a sample of GM Bedford's inspection forms.

7.7 BULK LOADING/UNLOADING PROCEDURES

GM Bedford incorporates the GM Truck Loading/Unloading Procedures along with following the minimum requirements for DOT. Facility procedures for truck loading and unloading have been included as Attachment G.

7.8 TRAINING

The personnel training program for this plant is incorporated in the overall plant program for the training of all employees to perform their assignments in a safe manner and in accordance with all plant policies, regulations and procedures.

The plant departments are responsible for preparing the job procedures and insuring that their employees are trained properly to perform their job assignments. The Environmental Department gives guidance and directions on Hazardous Wastes Management. The Environmental Department staff has received training on the handling of hazardous materials.

The General Motors Corporate Legal Staff issues information bulletins, concerning all environmental areas including Hazardous Waste Management, to plants in the Corporation. This information is reviewed by the Environmental Department and if applicable reviewed with personnel that handle hazardous waste. New requirements are incorporated into job procedures, if necessary.

The specific areas that are covered in the training program include:

SPCC Training

Facility personnel that work in the area of oil storage have been instructed by management in the operation and maintenance of oil pollution prevention equipment and pollution control laws and regulations.

Hazardous Materials Training

All employees involved in handling hazardous waste have received training in the proper handling, storage, labeling, disposal, and emergency spill response of hazardous materials/wastes. The emergency and alternate coordinators have obtained HAZWOPER Operations Level Training. The emergency and alternate coordinators receive refresher training once a year.

Fire Brigade

Fire Brigade training consists of classroom and hands-on training in fighting class A, B, C and D fires. Employees that may participate in this training include: maintenance, security, and supervisory personnel. Classroom training consists of slides, films, and discussion. In the field training, members are exposed to various types of fires to extinguish.

7.9 SECURITY

Security guards are present at the facility 24 hours a day. The guards control all entry and exiting of persons to the plant. The entire GM Powertrain Bedford facility is fenced with guarded access gates. The facility is well lit on the exterior as well as the interior of the plant. A phone is available in the hazardous waste accumulation area as a means of direct communication.

In addition to the above, the waste management area has additional fencing and gates which are monitored by direct line of sight from the guard house.

Signs are also posted on the fence in the drum storage area which state, "Danger - Unauthorized Personnel Keep Out" and "No Smoking - Flammable Liquids". Another sign is posted in the hazardous waste designated storage area which states that hazardous wastes are stored in that area.

The Security gatehouse is located approximately 300 feet from the hazardous waste storage area. The plant guards are on duty at all times in this gatehouse and have radio and telephone communication both in and out of the plant.

If an emergency situation occurs, the evacuation plan will be followed. Refer to Attachment H for a copy of the evacuation plan.

7.10 PLANT WARNING SYSTEM

Warnings will be provided utilizing a plant wide annunciation system. If not working, runners will be sent throughout the facilities. Below is a brief explanation of the warning system. Refer to the Disaster Preparedness Plan for more details.

Take Shelter Alarm

A slow wail will sound through the plant to signal a take shelter alarm.

Evacuation Signal

The evacuation signal is a 1 to 6 horn blast. The number of horn blasts defines the area of the plant that needs to be evacuated. Three (3) horn blasts signals a total plant evacuation, while the other sequences of horn blasts signal the evacuation of a specific department or area (e.g. two (2) horn blasts signals the evacuation of Die Cast South and Die Cast West).

All Clear

The all clear notification will be given by first ceasing the original signal followed by a steady horn. The all clear will be used when conditions have returned to normal or the hazardous event no longer threatens plant personnel or facilities.

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 8.0 PLAN AMENDMENT AND SUBMISSION REQUIREMENTS

This section includes information on the procedures the facility has available for modifying this plan. Detail has been provided for updates under the requirements of both the SPCC and RCRA regulations. In addition to the amendment requirements, a history of amendments has been provided.

8.1 SPCC AMENDMENTS

In accordance with 40 CFR, Part 112.5, this Plan shall be updated/amended under the following circumstances:

- Whenever there is a change in facility design, construction, operation, or maintenance which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines;
- If the plan fails in an emergency, the list of emergency equipment changes or the regulations are revised; and
- At least once every three years from the date the facility becomes subject to SPCC requirements if more effective field-proven spill prevention and control technology which will significantly reduce the likelihood of a spill event from the facility is available.

It is the responsibility of the Environmental Department to complete the yearly checklist, located in Attachment I to determine if it is necessary to update the Release Plan. Updates, of other than names, phone numbers and etc, which apply to the SPCC requirements discussed above must be certified by a Professional Engineer.

Minor changes or additions will not require the book to be resubmitted and approved, but they will require that portion of the book to be updated and replaced.

8.2 RCRA AMENDMENTS

In accordance with 40 CFR, Part 265.54, this Plan shall be updated/amended under the following circumstances:

- Whenever there is a change in facility design, construction, operation, or maintenance which materially increases the potential for fires, explosions, or releases of hazardous waste constituents, or changes the response necessary in an emergency; or
- Whenever the plan fails in an emergency; and
- Whenever the list of Emergency Coordinators or emergency equipment changes.

It is the responsibility of GM to periodically review the facility operations to determine if it is necessary to update the Plan.

Minor changes or additions will not require the book to be resubmitted and approved, but they will require that portion of the book to be updated and replaced.

Specific situations at the facility that would cause the Plan to require updating include:

- Redesign or alteration of the tank farms at the facility, including installation, replacement, or removal of active tanks;
- Redesign or alteration of hazardous waste storage areas;
- A change in the Emergency Coordinator list:
- A significant alteration or relocation of the emergency equipment maintained at the facility; and
- A significant change in the hazardous materials used at the facility.

8.3 AMENDMENT HISTORY

Date	Revised By	Cause for Revision
3-7-99	Kim Dobosenski	Change in the Internal / External Notification Flowchart (new safety director) and additional containment was added to the oil tank at the storm lagoon.
1/18/00	Kim Dobosenski	Change to Internal/External Notification Flowchart and updated emergency equipment listing.
1/15/01	Kim Dobosenski	Change to Internal/External Notification Flowcharts and updated emergency equipment listing.

GM POWERTRAIN BEDFORD PLANT * INDICATES REVISION REVISER Kim Dobosenski	**EMERGENCY RESPONSE** ***Emergency Preparedness & Response Plan Reviews***	FORM NO. 5523-10(B) DATE ISSUED: 9/24/98 REVISION # 1 REVISION DATE: 12/15/99

***Complete This Section For *Release Plan* Reviews:**

1. Review Performed By: Kimberly Dobosenski

   Date of Review: 12/27/00 Date of Last Review: 12/30/99

2. Section(s) of the *Release Plan* requiring revisions:

   Internal / External Notification Flowcharts

   Section 1.2, Section 3.0, Section 4.0, Section 6.0, Section 7.0, Section 8.0, Section 9.0, Section 12.0, Attachment D, Attachment E, Attachment F, Attachment G, Attachment H, Attachment L, Attachment M, Appendix 2, Appendix 3

3. Date revisions were completed for each section:

   1/16/01 - revisions to all sections were completed.

****Complete This Section For Disaster Preparedness Plan Reviews:***

1. Review Performed By: ERIC TRENEVAL

Date of Review: JUNE 26 2000 *Date of Last Review:* FEBRUARY 29, 2000

2. Section(s) of the Disaster Preparedness Plan requiring revisions:

THE GMPT BEDFORD - DISASTER PREPAREDNESS PLAN WAS APPROVED AND ISSUED IN JUNE OF 2000. ALL SECTIONS WERE REVISED TO REFLECT THE GM CORPORATE SECURITY & FIRE TEMPLATE.

3. Date revisions were completed for each section:

REVISIONS TO THE DISASTER PREPAREDNESS PLAN WERE COMPLETED IN JUNE OF 2000.

Print Name: Kimberly Dobosenski
(Environmental Management System Representative)

Signature: Kimberly Dobosenski **Date:** 1/16/01

GM POWERTRAIN BEDFORD PLANT * INDICATES REVISION REVISER Kim Dobosenski	**EMERGENCY RESPONSE** ***Emergency Preparedness & Response Plan Reviews***	FORM NO. 5523-10(B) DATE ISSUED: 9/24/98 REVISION # 1 REVISION DATE: 12/15/99

***Complete This Section For *Release Plan* Reviews:**

1. Review Performed By: Kimberly Dobosenski

Date of Review: 12/30/99 Date of Last Review: 3/7/99

2. Section(s) of the *Release Plan* requiring revisions:

Internal / External Notifications
Section 3.0 Section 8.0 Attachment F
Section 4.0 Section 9.0 Attachment G
Section 6.0 Section 10.0 Appendix 3
Section 7.0 Attachment D
Attachment E

3. Date revisions were completed for each section:

1/7/00 - for Internal and External Notifications
1/17/00 - for Sections 3.0 ~~&~~
1/18/00 - for Sections 4.0 - Attachment G
1/19/00 - for Appendix 3

****Complete This Section For Disaster Preparedness Plan Reviews:***

1. Review Performed By: MIKE SULZ, ERIC RENEVAL & LEVI DAVIS

Date of Review: JUNE 1999 *Date of Last Review:* 1998

2. Section(s) of the Disaster Preparedness Plan requiring revisions:

ALL SECTIONS OF THE PLAN REQUIRED REVISIONS TO MEET NEW CORPORATE STANDARDS.

3. Date revisions were completed for each section:

JANUARY 14, 2000

Print Name: Wm Schoonmaker
(Environmental Management System Representative)

Signature: Wm Schoonmaker **Date:** 1-19-00

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 9.0 LISTING OF SIGNIFICANT MATERIAL STORAGE AREAS

9.1 LOCATION

Location of significant material storage areas are shown on the facility map included in Section 6.

9.2 LISTING OF MATERIAL STORAGE LOCATIONS

A listing of material storage areas has been included in this section.

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
TABLE 1 MATERIAL STORAGE

Oils & Fuels

Container Number	Material Description	General Location	No. Containers	Construction Material	Capacity (Gals)	Contained Yes/No	Containment Capacity (%)
A-1	Waste Hydraulic Fluid	Outside of Secondary Bldg	1	Steel	1,500	Y	150%
A-2	Gasoline	Piston Loading Area	1	Steel	1,000	Y	Self Contained
A-3	Diesel Fuel	Piston Loading Area	1	Steel	1,000	Y	Self Contained
A-4	Water Glycol	Old A-Crib Area	2	Steel	5,000	Y	Bldg is Containment
A-5	PCB	Drum Storage Area	2	Steel	55 Gal Drums	Y	Self Contained
A-6	Gulf Cut Oil	Receiving	3	Steel	350 Gal Totes	Y	Bldg is Containment
A-7	Various Oils	Oil House	40	Steel	55 Gal Drums	Y	Contained and Drains to WWTP
A-8	Lube Oil	Tool Room	12	Vendor Supplied	Totes	Y	Bldg is Containment
A-9	Waste/Used Oil	Tool Room	16-20	Steel	55 Gal Drums	Y	Bldg is Containment
A-10	Way Lubricant	Receiving	1	Vendor Supplied	350	Y	Bldg is Containment

A- Aboveground PU- Partially Underground

Oils & Fuels Cont.

Container Number	Material Description	General Location	No. Containers	Construction Material	Capacity (Gals)	Contained Yes/No	Containment Capacity (%)
A-11	Oil	Die Cast South	4	Steel	Totes	Y	Bldg is Containment
A-12	Oil	Die Cast South	4	Steel	55 Gal Drums	Y	Bldg is Containment
A-13	Oil	Storm Lagoon	1	Steel	290	Y	120%
PU-14	Skim Oil Tank	Outside of Secondary Bldg	1	Steel	2,000	N	Drains to Storm Lagoon

Hazardous Waste

Container Number	Material Description	General Location	No. Containers	Construction Material	Capacity (Gals)	Contained Yes/No	Containment Capacity (%)
A-15	Waste Paint Solvent	Drum Storage Area	2	Steel	55 Gal Drums	Y	Self Contained Cabinet Located in Diked Area

Chemicals

Container Number	Material Description	General Location	No. Containers	Construction Material	Capacity (Gals)	Contained Yes/No	Containment Capacity (%)
A-16	Urea	Secondary Bldg.	1	Fiberglass	300	Y	Bldg is Containment
A-17	Polymer Mix Tank	Secondary Bldg.	1	PVC	300	Y	150%
A-18	Polymer Neat Tank	Secondary Bldg.	1	PVC	1,200	Y	150%
A-19	HCl	Outside Filter Bldg.	1	PVC	1,500	Y	>150%

A- Aboveground PU- Partially Underground

Chemicals Cont.

Container Number	Material Description	General Location	No. Containers	Construction Material	Capacity (Gals)	Contained Yes/No	Containment Capacity (%)
A-20	Sodium Hypochlorite	Filter Bldg.	1	PVC	1,500	Y	>150 %
A-21	Sodium Chlorite	Filter Bldg.	1	PVC	1,500	Y	150%
A-22	Corrosion Inhibitor	Filter Bldg.	1	PVC	1,500	Y	150%
A-23	Ferric Sulfate	Sludge Bldg.	1	PVC	5,800	Y	115% and Bldg drains to Surge Basin
A-24	Primary/Secondary Sludge	Sludge Bldg.	2	Steel	1,000,000	Y	Contained by an Earthen Dike
A-25	Holding Sludge Tank	Sludge Bldg.	1	Steel	10,000	Y	Bldg. Drains to Surge Basin
A-26	Contact Tank	Sludge Bldg.	1	Steel	~5,000	Y	Bldg. Drains to Surge Basin
A-27	Filterate Storage Tank	Sludge Bldg.	1	Steel	~2,500	Y	Bldg. Drains to Surge Basin
A-28	Lime Slurry Tank	Sludge Bldg.	1	Steel	1,000	Y	Bldg. Drains to Surge Basin
A-29	Alum	Aeration Bldg.	2	PVC	2,000	Y	>150 %
A-30	Paint Thinner	Drum Storage Area	3	Steel	55 Gal Drums	Y	Contained and Drains to WWTP
A-31	Lacquer	Drum Storage Area	3	Steel	55 Gal Drums	Y	Contained and Drains to WWTP
A-32	Corrosion Inhibitor	Drum Storage Area	3	PVC	1,500	Y	Contained and Drains to WWTP
A-33	Sodium Hypochlorite	Powerhouse	2	PVC	350	Y	Bldg is Containment
A-34	Water Treatment Chemicals	Powerhouse	2	PVC	350	Y	Bldg is Containment
A-35	Anti Foam	South Die Cast	1	PVC	350	Y	Bldg is Containment
A-36	Sodium Hypochlorite	South Die Cast	1	PVC	350	Y	Bldg is Containment

A- Aboveground PU- Partially Underground

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 10.0 WORST CASE SCENARIO

POTENTIAL EVENT	SPILL DIRECTION	VOLUME RELEASED	SPILL RATE
Complete failure of a full tank	Containment or catch basin which drains to storm lagoon	1,000	Instantaneous
Partial failure of a full tank	Containment or catch basin which drains to storm lagoon	1 to 999 gallons	Gradual to instantaneous
Tank overfill	Catch basin which drains to storm lagoon	1 to many gallons	Up to pump capacity
Pump rupture or failure	Catch basin which drains to storm lagoon	1 to several gallons	1 gallon per minute up to pump capacity
Pipe failure	Tank Containment	Several ounces to several gallons	4 gallons per minute
Leaking pipe, hose or nozzle.	Tank Containment	Several ounces to several gallons	1 gallon per minute up to pump capacity
Tank truck leak or failure	Catch basin which drains to storm lagoon	1 to 8,000 gallons	Gradual to instantaneous
Hose leak during truck loading	Catch basin which drains to storm lagoon	1 to several gallons	1 gallon per minute up to pump capacity

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 11.0 SPILL HISTORY

11.1 SPILL EVENTS

GM Bedford has not had any reportable spills in the last three years. Spills dating back to 1973 are kept in a separate file in the Environmental Manager's Office.

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
SECTION 12.0 PLAN DISTRIBUTION

12.1 DISTRIBUTION PROCEDURE

Copies of this plan have been provided to the following departments and the local emergency/medical responders:

NAME	PHONE NUMBER	PLAN NUMBER
Environmental Engineering	(812) 279-7404	01
Security	(812) 279-7360	02
Process Control and Logistics (PC&L) Department	(812) 279-7166	03
Maintenance	(812) 279-7374	04
Safety	(812) 279-7216	05
Bedford Fire Department	(812) 275-4544	06
Bedford Police Department	(812) 275-3311	07
Regional Medical Center	(812) 275-1200	08
Lawrence County Local Emergency Planning Committee	(812) 279-6111	09
Dunn Memorial Hospital	(812) 279-2100	10
Environmental Board (Pistons)	N/A	11
Environmental Board (Die Cast)	N/A	12
Environmental Board (Guard House)	N/A	13
Resource Management	(812) 279-7144	14
Chemical Management	(812) 279-7018	15
Spill Recovery of Indiana	(800) 421-7764	16

Attachment A

Reportable Quantity Table

GENERAL MOTORS CORPORATION - BEDFORD
REPORTABLE QUANTITY TABLE
RELEASE PLAN

Spills to surface water, internal and external to the facility:

	CERCLA	EHS (SARA Title III)	RCRA	SPCC
Liquid Aluminum Sulfate (Alum)	736 gallons	N/A	N/A	N/A
Drew 6110 Coreactant (Sodium Hypochlorite)	293 gallons	N/A	N/A	N/A
Amersep 5320 Coagulant (Ferric Sulfate)	39 gallons	N/A	N/A	N/A
Amersep 5320 Coagulant (Sulfuric Acid)	6,500 gallons	6,500 gallons	N/A	N/A
Drew 6005 (Hydrochloric Acid)	961 gallons	N/A	N/A	N/A
PCB	1 pound	N/A	N/A	N/A
Hazardous Waste	N/A	N/A	55 gallons	N/A
Petroleum (gas, diesel, oils)	N/A	N/A	N/A	Any spill that causes a sheen.

GENERAL MOTORS CORPORATION - BEDFORD
REPORTABLE QUANTITY TABLE (Cont.)
RELEASE PLAN

Spills to soil beyond facility boundary:

	CERCLA	EHS (SARA Title III)	RCRA	SPCC
Liquid Aluminum Sulfate (Alum)	736 gallons	N/A	N/A	N/A
Drew 6110 Coreactant (Sodium Hypochlorite)	293 gallons	N/A	N/A	N/A
Amersep 5320 Coagulant (Ferric Sulfate)	39 gallons	N/A	N/A	N/A
Amersep 5320 Coagulant (Sulfuric Acid)	6,500 gallons	6,500 gallons	N/A	N/A
Drew 6005 (Hydrochloric Acid)	961 gallons	N/A	N/A	N/A
PCB	1 pound	N/A	N/A	N/A
Hazardous Waste	N/A	N/A	55 gallons	N/A
Petroleum (gas, diesel, oils)	N/A	N/A	N/A	55 gallons

GENERAL MOTORS CORPORATION - BEDFORD
REPORTABLE QUANTITY TABLE (Cont.)
RELEASE PLAN

Spills to soil within facility:

	CERCLA	EHS (SARA Title III)	RCRA	SPCC
Liquid Aluminum Sulfate (Alum)	736 gallons	N/A	N/A	N/A
Drew 6110 Coreactant (Sodium Hypochlorite)	293 gallons	N/A	N/A	N/A
Amersep 5320 Coagulant (Ferric Sulfate)	39 gallons	N/A	N/A	N/A
Amersep 5320 Coagulant (Sulfuric Acid)	6,500 gallons	6,500 gallons	N/A	N/A
Drew 6005 (Hydrochloric Acid)	961 gallons	N/A	N/A	N/A
PCB	1 pound	N/A	N/A	N/A
Hazardous Waste	N/A	N/A	55 gallons	N/A
Petroleum (gas, diesel, oils)	N/A	N/A	N/A	1000 gallons

5,000 lbs. of 100% Alum $\left(\frac{\text{gal.}}{14\text{ lb.}}\right)$ = 357 gals. of 100% Alum

357 gals. of 100% Alum $\left(\frac{1}{0.485}\right)$ = 736 gals. of 48.5% Alum

1,000 lbs. of 100% Sodium Hypochlorite $\left(\frac{\text{gal.}}{12.6\text{ lb.}}\right)$ = 79 gals. of 100% Sodium Hypochlorite

79 gals. of 100% Sodium Hypochlorite $\left(\frac{1}{0.27}\right)$ = 293 gals. of 27% Sodium Hypochlorite

1,000 lbs. of 100% Ferric Sulfate $\left(\frac{\text{gal.}}{25.9\text{ lb.}}\right)$ = 39 gals. of 100% Ferric Sulfate

1,000 lbs. of 100% Sulfuric Acid $\left(\frac{\text{gal.}}{15.3\text{ lb.}}\right)$ = 65 gals. of 100% Sulfuric Acid

65 gals. of 100% Sulfuric Acid $\left(\frac{1}{0.01}\right)$ = 6,500 gals. of 1% Sulfuric Acid

5,000 lbs. of Hydrochloric Acid $\left(\frac{\text{gal.}}{13.7\text{ lb.}}\right)$ = 365 gals. of 100% Hydrochloric Acid

365 gals. of 100% Hydrochloric Acid $\left(\frac{\text{gal.}}{15.3\text{ lb.}}\right)$ = 961 gals. of 38% Hydrochloric Acid

General Alum & Chemical Corporation

Product Safety Data Sheet

Liquid Aluminum Sulfate
Alum

A. General Information

Trade Name (Common Name or Synonym)
Liquid Alum
C.A.S. 816043-01-5 (anhydrous)

Chemical Name
Aluminum Sulfate, aqueous solution

Formula
48.5% $Al_2(SO_4)_3 \cdot 14\ H_2O$ in water

Molecular Weight
594 (approx.) for $Al_2(SO_4)_3 \cdot 14\ H_2O$

Address
General Alum & Chemical Corporation
P.O. Box 819
Holland, Ohio 43528

Contact: Technical Director

Phone Number (419) 865-9000

Revised Date March 1996

B. First Aid Measures

Emergency Phone Number (419) 865-9000

Eyes:	Flush immediately with water, continuing for at least 15 minutes. If irritation persists, get medical attention.
Skin:	Flush with plenty of water, removing contaminated clothing. If irritation develops, get medical attention.
Inhalation:	Promptly remove to fresh air.
Ingestion:	If conscious, immediately give a large quantity of water or milk. If not already vomiting, induce vomiting by touching finger to back of throat. Get medical evaluation.

C. Hazards Information (Health)

Inhalation:	Inhalation of alum mist may irritate respiratory tract.
Ingestion:	May irritate gastrointestinal tract. Concentrated solutions may cause burns to the digestive tract. LD_{50} (mouse): 980 mg (Al)/kg — Reference (a). Recorded human fatal dose of 30 grams.
Skin:	May cause skin irritation.
Eyes:	May strongly irritate or burn eyes.
Permissible Concentration Air:	TLV: 2 mg(Al)/cu m. (ACGIH)
Biological:	N/A (See Section I)
Unusual Chronic Toxicity:	N/A

Hazards (Fire and Explosion)

Flash Point °C: ☒ Not flammable ☐ Open Cup ☐ Closed Cup

Auto Ignition Temperature °C: N/A

Flammable Limits in Air (% by Vol.): N/A

Unusual Fire and Explosion Hazards: See Hazardous Decomposition Products, Section G

Hazardous Materials Identification System (HMIS)

H: 1
F: 0
R: 1



D. Precautions/Procedures

Fire Extinguishing Agents Recommended:	N/A
Fire Extinguishing Agents to Avoid:	N/A
Special Fire Fighting Precautions:	Wear self-contained breathing apparatus approved by NIOSH. Use water spray to keep containers cool.
Ventilation:	*Local Exhaust* if misty condition prevails. May exceed TLV without visible indication.
Normal Handling:	Avoid contact with skin, eyes or clothing. Avoid breathing mist.
Storage:	Store in corrosive resistant container.
Spill or Leak:	Dilute small spills or leaks cautiously with plenty of water. Neutralize any further residue with alkali such as soda ash, lime or limestone. Adequate ventilation is required if soda ash or limestone is used, because of the consequent release of carbon dioxide gas. (See Section I for disposal methods.) *Large spills:* Dike up with soda ash, and neutralize and so forth as above.
Special Fire Precautions/ Procedures/ Label Instructions:	Not for food use unless labeled food grade. Not for drug use.

(continued on back)

E. Personal Protective Equipment

Respiratory Protection:	Where required, use a respirator approved by NIOSH for mists.
Eyes and Face:	Wear hard hat (or other head covering) and chemical safety goggles. Do not wear contact lenses.
Hands, Arms, and Body:	Wear impervious gloves and apron and full work clothing, including long-sleeved shirt and trousers, boots. Completely impervious clothes should be substituted if there is prolonged or repeated contact.
Other Clothing and Equipment:	Eye-wash and quick-drench shower facilities.

F. Physical Data

Material is (at Normal Conditions):	☒ Liquid ☐ Solid ☐ Gas ☐
Appearance and Odor:	Colorless to slightly amber liquid with a negligible degree of odor.
Boiling Point:	214°F/101°C Freezing Point: +5°F/-15°C
Specific Gravity (H_2O = 1):	1.328
Vapor Density (Air = 1):	N/A
Solubility in Water (% by Weight):	Complete
pH:	1% solution: pH = 3.5 (approx.)
Vapor Pressure:	(mm Hg at 20°C) ☐ (PSIG) ☐ N/A
Evaporation Rate:	(Butyl Acetate = 1) ☐ (Ether = 1) ☐ N/A
% Volatiles by Volume:	(At 20°C) N/A

G. Reactivity Data

Stability:	☐ Unstable ☒ Stable
Conditions to Avoid:	If evaporated to dryness, residue should not be exposed to temperature above 760°C (1400°F). These yield toxic and corrosive gases.
Incompatibility (Materials to Avoid):	Alkalies and water-reactive materials such as oleum: cause exothermic reactions
Hazardous Decomposition Products:	At temperature cited above, sulfur oxide gases. These are toxic and are oxidizers and corrosive. The trioxide is also a fire hazard. The loss of these gases leaves a caustic residue.
Hazardous Polymerization:	☐ May Occur ☒ Will not Occur
Conditions to Avoid:	N/A

H. Hazardous Ingredients (Mixtures Only)

Material or Component/C.A.S. #
Wt.% Hazard Data (See Section J)
10043-01-3 Aluminum Sulfate (Anhydrous) 48.5%

I. Environmental

Degradability/ Aquatic Toxicity:	Aquatic Toxicity: 14 PPM/36 hr./fundulus/fatal/fresh water 240 PPM/48 hr./Mosquitofish/TL-/" "water type not specified
EPA Hazardous Substance:	☒ Yes ☐ No Reportable Quantity, Aluminum Sulfate basis, 5,000#
Waste Disposal Methods (Disposer must comply with Federal, State and Local Disposal or Discharge Laws):	Neutralize with alkali, then flush to sewer with plenty of water if permitted by applicable disposal regulations. Neutralized waste may have to be disposed of by an an approved contractor. When using carbonates for neutralization, adequate precautions should be taken to minimize hazards and pressure build-up from CO_2 gas evolution.
RCRA Status of Unused Material:	EPA Hazardous Waste No. D002 (corrosive) if discarded — 40CFR 261-22

J. SARA/TITLE III Hazard Categories & Lists

PRODUCT HAZARD CATEGORIES:	
Chronic (Delayed) Health Hazard	No
Acute (Immediate) Health Hazard	Yes
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

LISTS.

Extremely Hazardous Substance (40 CFR 355, SARA Section 302)	No
CERCLA Hazardous Substance (40 CFR 302.4)	Yes — Aluminum Sulfate Basis RQ = 5,000 lbs
Toxic Chemical (40 CFR 372.65, SARA Section 313)	No

K. Additional Information

D.O.T. Classification — 8 (Corrosive)
DOT ID No. UN 3264
DOT Packing Group III
DOT Shipping Description (bulk loads) — RQ, Corrosive Liquid, Acidic, Inorganic, N.O.S., (Aluminum Sulfate Solution), 8, UN 3264, PG III.
Tanker Placard — Corrosive placard with ID No. 3264.

Information and data herein are believed to be accurate and compiled from accurate sources. Buyer assumes all risk for use, storage and handling to comply with State, Federal and Local regulations. General Alum and Chemical Corporation makes no warranty expressed or implied concerning the accuracy or completeness of the information supplied.

General Alum & Chemical Corporation

Technical Data Sheet

Liquid Aluminum Sulfate ALUM

Chemical Symbol	$Al_2(SO_4)_3 \cdot 14H_2O$ in Aqueous Solution
Name of Chemical	Liquid Aluminum Sulfate / Liquid Alum
Grade	Commercial / Iron Free / Food Chemical Codex / Custom Formulations Available
Density	#'s/Gallon ~~11.00~~ 11.1
Concentration	% as Al_2O_3 8.3 ± 0.2
Molecular Weight	Dry Alum ($14H_2O$ Product) 594
Description	Liquid Aluminum Sulfate, or Liquid Alum, is colorless to amber depending upon the grade specified.
Composition	Approximately 48.5% Dry Aluminum Sulfate.
Properties	Specific Gravity 1.328 Freezing Point 5°F Boiling Point 214°F pH, 1% Solution ($14H_2O$ product): 3.5 Store at temperature of 45°F minimum

Typical Analysis	Commercial	Iron Free
Total Soluble Al_2O_3%	8.3	8.3
Free Al_2O_3%	0.05	0.05
Total Iron (as Fe)%	0.1	0.005
Actual Ferric Iron (as Fe_2O_3)%	0.03	———
Water Insolubles %	0.01	0.004

Shipping Mode	Tank Trucks 4,500 gallons
Shipping Regulations	D.O.T. Classification: ORM-B / Proper Shipping Name: Aluminum Sulfate Solution / D.O.T. ID No.: NA 1760 / D.O.T. Label and placard: None
Shipping Locations	Toledo, Ohio, Indianapolis, Indiana and Saukville, Wisconsin.
Product Applications	**Pulp & Paper Industry** – Fixes rosin size on paper fibers, drainage and retention aid, pitch control agent. **Water Treatment** – Flocculation agent for solids or color removal. **Municipal and Industrial Wastewater Treatment** – Coagulation/Flocculation agent. Phosphorus removal. **Food Industry** – Firming agent in pickle & vegetable processing, processing aid in the preparation of baked goods, puddings and gelatins. **Grease/Soap Manufacture** – Source of Aluminum ion.

For technical information, contact:
General Alum & Chemical Corporation
P.O. Box 819
Holland, Ohio 43528 • (419) 865-8000
Toll-Free 1-800-537-7561

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Performance is the General Alum & Chemical Corporation difference.

SECTION 01: CHEMICAL PRODUCT & COMPANY ID

PRODUCT PRIMARY NAME: SODIUM HYPOCHLORITE
CHAT SYNONYMS: SODIUM HYPOCHLORITE

MSDS SIGNED BY NAME: CHARLES T. WILSON JR.
MSDS SIGNED BY TITLE: DIRECTOR OF ENVIROMENTAL SERVICES

SAFE USE CATEGORY AND DESCRIPTION: 11 -CORROSIVES - CONCENTRATED BASE - pH > 10

MSDS CREATE DATE: 1985-01-01
LAST UPDATED DATE: 1986-09-03

MANUFACTURER'S ID (MID): 000521293
MANUFACTURER'S NAME: ULRICH CHEMICAL CO
MANUFACTURER'S EMERGENCY PHONE NUMBER/TEXT: US 317-898-8632
MANUFACTURER'S MAILING ADDRESS:
3111 NORTH POST ROAD
INDIANAPOLIS IN 46226
US

CHEMICAL FAMILY NAME: OXIDIZING AGENT

MOLECULAR FORMULA: NAOCL

SECTION 02: COMPOSITION & INGREDIENT INFO

CAS#	FORMULATION		W/V	CHEMICAL NAME
001310732	= 14.7000/	0.0000%	V	Caustic soda
0007732185	= 73.3000/	0.0000%	V	WATER
0007782505	= 12.0000/	0.0000%	V	CHLORINE

THRESHOLD LIMIT VALUE: NOT APPLICABLE

PERMISSIBLE EXPOSURE LIMIT: NA

CERCLA (SUPERFUND) REPORTABLE QUANTITY (LBS): N

SECTION 03: HAZARDS IDENTIFICATION

PRIMARY ENTRY ROUTE INDICATORS:
SKIN PRIMARY ENTRY ROUTE INDICATOR = N
EYE PRIMARY ENTRY ROUTE INDICATOR = N
INHALATION PRIMARY ENTRY ROUTE INDICATOR = N
INGESTION PRIMARY ENTRY ROUTE INDICATOR = N
PRIMARY ROUTES OF ENTRY TEXT: NA

EFFECTS OF OVEREXPOSURE: IRRITATING EFFECTS INCREASE WITH STRENGHT OF SOLUTION AND TIME OF EXPOSURE.

SECTION 3 - OTHER INFORMATION: NA

SECTION 04: FIRST AID MEASURES

EMERGENCY FIRST AID PROCEDURES - GENERAL: EYES: WASH WITH WATER FOR AT

LEAST 15 MIN. CONTACT AN EYE SPECIALIST IMMEDIATELY. INGESTION:IF ACCIDENTALLY SWALLOWED DRINK WATER, MILK AND OBTAIN MEDICAL ATTENTION.DO NOT USE BAKING SODA OR ACIDIC ANTIDOTIES.INHALATION:REMOVE PERSON TO FRESH AIR.

SECTION 05: FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: NOT APPLICABLE

SPECIAL FIRE FIGHTING PROCEDURES: AVOID FUMES FROM SPILLED OR EXPOSED LIQUID, DILUTE COPIOUSLY, VENTILATE, AND BE PREPARED TO USE RESPIRATORY PROTECTION IF NEEDED. ACID CONTAMINATION WILL PRODUCE VERY IRRITATING FUMES SIMILAR TO CHLORINE GAS.

UNUSUAL FIRE AND EXPLOSION HAZARDS: BLEACH DECOMPOSES WHEN HEATED; DECOMPOSITION PRODUCTS MAT CAUSE CONTAINERS TO RUPTURE OR EXPLODE. VIGOROUS REACTION POSSIBLE WITH ORGANIC MATERIALS OR OXIDIZING AGENTS; MAY RESULT IN A FIRE.

SECTION 06: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: FLUSH WITH WATER TO DILUTE AS MUCH AS POSSIBLE AVOID HEAT AND CONTAMINATION WITH ACID MATERIALS.DO NOT USE COMBUSTIBLE MATERIALS SUCH AS SAWDUST TO ABSORB HYPOCHLORITE.

SECTION 07: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: NORMAL HANDLING PROCEDURE AS INSTUCTED ON CONTAINER.STORE IN COOL,DRY LOCATION AWAY FROM DIRECT SUNLIGHT.

SECTION 7 - OTHER INFORMATION: KEEP CONTAINERS VENTED DURING SHIPMENT

SECTION 08: EXPOSURE CONTROLS - PROTECTION

EYE PROTECTION: GOGGLES

RESPIRATORY PROTECTION: WHEN FUMES ARE PRESENT USE NIOSH APPROVED RESPIRATOR WITH ACID TYPE CANISTER.

PERSONAL PROTECTIVE EQUIPMENT: RUBBER APRON

SECTION 8 - OTHER INFORMATION: NONE

PROTECTIVE GLOVES (SPECIFY TYPE): RUBBER

SECTION 09: PHYSICAL & CHEMICAL PROPERTIES

ANALYTICAL VOC WITHOUT WATER: N

THEORETICAL VOC WITHOUT WATER: N

BOILING POINT TEXT: NA

SPECIFIC GRAVITY VALUES: = 1.1400

SPECIFIC GRAVITY TEXT: =1.14

VAPOR DENSITY TEXT: NA

VAPOR PRESSURE TEXT: NA

PERCENT VOLATILE BY VOLUME TEXT: NA

PERCENT SOLID BY WEIGHT TEXT: NA

EVAPORATION RATE TEXT: NA

SOLUBILITY IN WATER TEXT: COMPLETE

PH NUMBER SOLUTION TEXT: 12

PACKAGED PH NUMBER CONCENTRATION VALUES: = 12.0000

APPEARANCE: LIGHT YELLOW-GREEN - PUNGENT LIKE CHLORINE

PHYSICAL STATE: LIQ
PHYSICAL STATE TEXT: LIQUID

SECTION 10: STABILITY & REACTIVITY

STABILITY INDICATOR: Y
STABILITY - CONDITIONS TO AVOID: TEMPERATURES & TIME, ARE SODIUM CHLORIDE, SODIUM CHLORATE & OXYGE
STABILITY - TEXT: Y

INCOMPATIBLE MATERIALS: AVOID CONTAMINATION WITH HEAVY MATALS.

HAZARDOUS DECOMPOSITION PRODUCTS: HYPOCHLOROUS ACID (HOCI) CHLORINE HYDROCHLORIC ACID.COMPOSITION DEPENDS UPON TEMPERATURE & DECREASE IN PH.

HAZARDOUS POLYMERIZATION INDICATOR: N
HAZARDOUS POLYMERIZATION - CONDITIONS TO AVOID: TEMPERATURES AND TIME
HAZARDOUS POLYMERIZATION TEXT: NOT APPLICIABLE

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: REDUCE WITH CHEMICALS LISTED BELOW.KEEP ON ALKALINE SIDE AND DILUTE WITH COPIOUS QUANTITIES OF WATER.MAIN END PRODUCT IS SALT WATER.(NACL) REDUCING AGENTS SUCH AS BISULFITES OR FERROUS SALT SOLUTIONS.

SECTION 16: OTHER INFORMATION

SECTION 16 - OTHER INFORMATION: NONE

RCRA HAZARDOUS WASTE NUMBER TEXT: N

LOCAL EXHAUST: NONE SPECIAL

SPECIAL PROTECTION: NONE

SPECIAL PROTECTION (MECHANICAL): NONE

SECTION 01: CHEMICAL PRODUCT & COMPANY ID

PRODUCT PRIMARY NAME: FERRIC SULFATE
CHAT SYNONYMS: FERRIC SULFATE

SAFE USE CATEGORY AND DESCRIPTION: 08 -METALS, METAL SALTS, SOLDERS, POWDERED M

MSDS CREATE DATE: 1985-01-01
LAST UPDATED DATE: 1992-12-07

MANUFACTURER'S ID (MID): 000508688
MANUFACTURER'S NAME: EASTMAN KODAK CO
MANUFACTURER'S EMERGENCY PHONE NUMBER/TEXT: US 716-722-5151 EMERGENCY HEALTH, SAFETY
MANUFACTURER'S MAILING ADDRESS:
343 STATE ST
ROCHESTER NY 14650
US

MOLECULAR FORMULA: FE.3/2 H2 O4 S

SECTION 02: COMPOSITION & INGREDIENT INFO

CAS#	FORMULATION	W/V	CHEMICAL NAME
010028225	=100.0000/ 0.0000%	N	IRON(III) SULFATE

THRESHOLD LIMIT VALUE: ACGIH: 10028225: 1 MG/M3 (AS IRON). // 1 MG/M3 AS FE TWA, ACGIH 1986-87.

SECTION 03: HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE - SKIN: LOW HAZARD FOR USUAL INDUSTRIAL HANDLING.
EFFECTS OF OVEREXPOSURE - EYE: NO SPECIFIC HAZARD KNOWN. CONTACT MAY CAUSE TRANSIENT IRRITATION.
EFFECTS OF OVEREXPOSURE - INHALATION: LOW HAZARD FOR USUAL INDUSTRIAL HANDLING.
EFFECTS OF OVEREXPOSURE - INGESTION: EXPECTED TO BE A LOW INGESTION HAZARD.

SECTION 04: FIRST AID MEASURES

EMERGENCY FIRST AID PROCEDURES - SKIN: WASH AFTER EACH CONTACT.
EMERGENCY FIRST AID PROCEDURES - EYES: FLUSH EYES WITH PLENTY OF WATER.
EMERGENCY FIRST AID PROCEDURES - INHALATION: REMOVE TO FRESH AIR FOLLOWING OVEREXPOSURE.
EMERGENCY FIRST AID PROCEDURES - INGESTION: DRINK 1-2 GLASSES OF WATER. SEEK MEDICAL ATTENTION.

SECTION 05: FIRE-FIGHTING MEASURES

[illegible] WATER SPRAY, DRY CHEMICAL, CARBON DIOXIDE,

SPECIAL FIRE FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING.

UNUSUAL FIRE AND EXPLOSION HAZARDS: FIRE OR EXCESSIVE HEAT MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS.

FLASH POINT TEXT: NOT APPLICABLE.

SECTION 06: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: FLUSH TO A SEVER WITH LARGE AMOUNTS OF WATER.

SECTION 07: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: NONE

SECTION 08: EXPOSURE CONTROLS - PROTECTION

EYE PROTECTION: SAFETY GLASSES RECOMMENDED IN INDUSTRIAL OPERATIONS INVOLVING CHEMICALS.

SKIN PROTECTION: IF PROLONGED OR REPEATED SKIN CONTACT IS NECESSARY, GLOVES OR OTHER PROTECTION MAY BE REQUIRED.

RESPIRATORY PROTECTION: RESPIRATORY PROTECTION MAY BE NEEDED IN SPECIAL CIRCUMSTANCES.

VENTILATION: GOOD VENTILATION SHOULD BE SUFFICIENT. SUPPLEMENTARY VENTILATION MAY BE NEEDED IN SPECIAL CIRCUMSTANCES.

PROTECTIVE GLOVES (SPECIFY TYPE): AWAITING EXACT TYPE.

SECTION 09: PHYSICAL & CHEMICAL PROPERTIES

THEORETICAL VOC WITHOUT WATER: NA.

SPECIFIC GRAVITY VALUES: = 3.1000

VAPOR PRESSURE TEXT: NEGLIGIBLE.

EVAPORATION RATE TEXT: (N-BUTYL ACETATE = 1): NEGLIGIBLE.

SOLUBILITY IN WATER TEXT: APPRECIABLE.

APPEARANCE: GRAY CRYSTALLINE SOLID.

SECTION 9 - OTHER INFORMATION: MELTING WITH DECOMPOSITION: 480 C (896 F) // VOLATILE FRACTION BY WEIGHT: NEGLIGIBLE.

SECTION 10: STABILITY & REACTIVITY

STABILITY INDICATOR: Y
STABILITY - TEXT: STABLE.

ITH WHICH THE MATERIAL MAY REASONABLY COME INTO CONTACT.

HAZARDOUS DECOMPOSITION PRODUCTS: THERMAL DECOMPOSITION MAY PRODUCE OXIDES OF SULFUR.

HAZARDOUS POLYMERIZATION INDICATOR: N
HAZARDOUS POLYMERIZATION TEXT: WILL NOT OCCUR.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: DISCHARGE, TREATMENT, OR DISPOSAL MAY BE SUBJECT TO FEDERAL, STATE OR LOCAL LAWS.

SECTION 14: TRANSPORT INFORMATION

TDG CLASSIFICATION: REGULATED
TDG SHIPPING NAME: NR

SECTION 15: REGULATORY INFORMATION

SECTION 15 - OTHER INFORMATION: WHMIS CLASS: N

SECTION 01: CHEMICAL PRODUCT & COMPANY ID

PRODUCT PRIMARY NAME: SULFURIC ACID, N/50
CHAT SYNONYMS: SULFURIC ACID, N/50

SAFE USE CATEGORY AND DESCRIPTION: 13 -COMPRESSED GAS - INERT

MSDS CREATE DATE: 1985-01-01
LAST UPDATED DATE: 1992-09-30

MANUFACTURER'S ID (MID): 000525910
MANUFACTURER'S NAME: DREW DIVISIONS/ASHLAND CHEMICAL INC
MANUFACTURER'S EMERGENCY PHONE NUMBER/TEXT: US 606-324-1133
MANUFACTURER'S MAILING ADDRESS:

ONE DREW PLAZA
SUBSIDIARY OF ASHLAND OIL
BOONTON NJ 07005
US

CHEMICAL FAMILY NAME: NA

SECTION 02: COMPOSITION & INGREDIENT INFO

CAS#	FORMULATION		W/V	CHEMICAL NAME
007664939	< 0.0000/	1.0000%	N	Sulfuric acid
007732185	>100.0000/	0.0000%	N	WATER

THRESHOLD LIMIT VALUE: 1 MG/M3

PERMISSIBLE EXPOSURE LIMIT: 1 MG/M3

SECTION 03: HAZARDS IDENTIFICATION

PRIMARY ENTRY ROUTE INDICATORS:
SKIN PRIMARY ENTRY ROUTE INDICATOR = N
EYE PRIMARY ENTRY ROUTE INDICATOR = Y
INHALATION PRIMARY ENTRY ROUTE INDICATOR = N
INGESTION PRIMARY ENTRY ROUTE INDICATOR = Y
PRIMARY ROUTES OF ENTRY TEXT: EYES INGESTION

EFFECTS OF OVEREXPOSURE: MAY BE IRRITATING TO EYES

ADDITIONAL HEALTH HAZARD DATA: AVOID CONTACT WITH EYES. WASH THOROUGHLY AFTER HANDLING.

SECTION 04: FIRST AID MEASURES

EMERGENCY FIRST AID PROCEDURES - GENERAL: EYE AND SKIN CONTACT: IMMEDIATELY FLUSH EYES WITH WATER FOR 15 MINUTES. CALL PHYSICIAN. FLUSH SKIN WITH PLENTY OF WATER. INGESTION: DO NOT INDUCE VOMITING. GIVE 1 - 2 GLASSES OF WATER. CALL A PHYSICIAN IMMEDIATELY. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. INHALATION: REMOVE O FRESH AIR.

SECTION 05: FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: NA

UNUSUAL FIRE AND EXPLOSION HAZARDS: NA

SECTION 06: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: COVER CONTAMINATED SURFACES WITH SODA ASH OR SODIUM BICARBONATE. MIX AND ADD WATER IF NECESSARY. USE LITMUS PAPER AND MAKE SURE PH OF SLURRY IS NEUTRAL OR ADD NEUTRALIZER UNTIL MIXTURE STOPS BUBBLING. SCOOP UP THE SLURRY AND WASH WITH NEUTRAL WASTE DOWN THE DRAIN WITH EXCESS WATER. WASH THE SIT WITH SODA ASH SOLUTION.

SECTION 07: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: STORE TIGHTLY CLOSED IN A COOL, DRY PLACE.

SECTION 08: EXPOSURE CONTROLS - PROTECTION

PERSONAL PROTECTIVE EQUIPMENT: ADEQUATE VENTILATION, SAFETY GLASSES, DISPOSABLE GLOVES.

SECTION 09: PHYSICAL & CHEMICAL PROPERTIES

BOILING POINT TEMPS: 100.00C/ 212.00F
BOILING POINT TEXT: 100 DEG C

SPECIFIC GRAVITY VALUES: = 0.9850
SPECIFIC GRAVITY TEXT: =0.985

VAPOR DENSITY TEXT: ND

VAPOR PRESSURE TEXT: NOT DETERMINED

EVAPORATION RATE TEXT: ND

SOLUBILITY IN WATER TEXT: MISCIBLE

PH NUMBER SOLUTION TEXT: 2.0

PACKAGED PH NUMBER CONCENTRATION VALUES: = 2.0000

APPEARANCE: CLEAR AND COLORLESS AND ODORLESS

PHYSICAL STATE: LIQ
PHYSICAL STATE TEXT: LIQUID

SECTION 10: STABILITY & REACTIVITY

STABILITY INDICATOR: Y
STABILITY - CONDITIONS TO AVOID: EXTREME TEMPERATURES
STABILITY - TEXT: STABLE

HAZARDOUS DECOMPOSITION PRODUCTS: NA

HAZARDOUS POLYMERIZATION INDICATOR: N
HAZARDOUS POLYMERIZATION - CONDITIONS TO AVOID: EXTREME TEMPERATURES

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

SECTION 01: CHEMICAL PRODUCT & COMPANY ID

PRODUCT PRIMARY NAME: HYDROCHLORIC ACID, CONCENTRATED (36-37%)
CHAT SYNONYMS: A142
A144
A466
A4662
A481
A508
CHLOROHYDRIC ACID
HYDROCHLORIC ACID, CONCENTRATED (36-37)
HYDROCHLORIC ACID, CONCENTRATED (36-37%)
HYDROCHLORIDE
HYDROCLORIC ACID, CONCENTRATED
HYDROGEN CHLORIDE, 23 EB
MURIATIC ACID
SPIRITS OF SALT
UN 1789
187317 (OLD FID)
192519 (OLD FID)
220506 (OLD FID)
237442 (OLD FID)
35392 (OLD FID)

SAFE USE CATEGORY AND DESCRIPTION: 09 -CORROSIVES -- CONCENTRATED ACID - pH < 4

MSDS CREATE DATE: 1985-01-01
LAST UPDATED DATE: 1994-12-02

MANUFACTURER'S ID (MID): 000529957
MANUFACTURER'S NAME: FISHER SCIENTIFIC CO.
MANUFACTURER'S EMERGENCY PHONE NUMBER/TEXT: US 201-796-7100
MANUFACTURER'S MAILING ADDRESS:
1 REAGENT LANE
P.O. BOX 375
FAIRLAWN NJ 07410
US

CHEMICAL FAMILY NAME: INORGANIC ACID

MOLECULAR FORMULA: H-CL

SECTION 02: COMPOSITION & INGREDIENT INFO

CAS#	FORMULATION	W/V	CHEMICAL NAME
007647010	R 35.0000/ 38.0000%	N	HYDROCHLORIC ACID
007732185	R 62.0000/ 65.0000%	N	WATER

SECTION 2 -- OTHER INFORMATION: HYDROGEN CHLORIDE: 5PPM,(7.6MG/M3), NIOSH RECOMMENDED CEILING. // 5PPM (7.6MG/M3) DFG MAK TWA. // 10 PPM (15.2 MG/M3) DFG MAK 5 MINUTE PEAK, MOMENTARY VALUE, 8 TEMES/SHIFT. // OTHER CONTAMINANTS.

THRESHOLD LIMIT VALUE: HYDROGEN CHLORIDE: 5PPM (7.6MG/M3), CEILING

PERMISSIBLE EXPOSURE LIMIT: HYDROGEN CHLORIDE: 5PPM (7.6MG/M3) CEILING.

CERCLA (SUPERFUND) REPORTABLE QUANTITY (LBS): 5000 POUNDS CERCLA SECTION 103. // REPORTABLE QUANTITY (LIQUID) REPORTABLE QUANTITY (RQ) 5000 POUNDS. THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) SECTION 304 REQUIRES THAT A RELEASE EQUAL TO OR GREATER THAN THE REPORTABLE QUANTITY FOR THIS SUBSTANCE BE IMMEDIATELY REPORTED TO THE LOCAL EMERGENCY PLANNING COMMITTEE AND THE STATE EMERGENCY RESPONSE COMMISSION (40 CFR 355.40). IF THE RELEASE OF THIS SUBSTANCE IS REPORTABLE UNDER CERCLA SECTION 10'@', THE NATIONAL RESPONSE CENTER MUST BE NOTIFIED IMMEDIATELY AT (800) 424-8802 OR (202) 426-2675 IN THE METROPOLITAN WASHINGTON, D.C. AREA (40 CFR 302.6).

SECTION 03: HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE - SKIN: HYDROGEN CHLORIDE (HYDROCHLORIC ACID): CORROSIVE.
EFFECTS OF OVEREXPOSURE - SKIN ACUTE: CONTACT MAY CAUSE SEVERE IRRITATION, INFLAMMATION, ULCERATION, NECROSIS AND CHEMICAL BURNS. SHOCK SYMPTOMS MAY DEVELOP INCLUDING RAPID PULSE, SWEATING AND COLLAPSE. PHOTOSENSITIZATION REACTIONS MAY OCCUR IN PERSONS PREVIOUSLY EXPOSED. CONTACT WITH A COMPRESSED GAS MAY CAUSE FROSTBITE.
EFFECTS OF OVEREXPOSURE - SKIN CHRONIC: REPEATED OR PROLONGED CONTACT WITH VAPORS OR DILUTE SOLUTIONS MAY CAUSE DERMATITIS. PHOTOSENSITIZATION MAY OCCUR.
EFFECTS OF OVEREXPOSURE - EYE: HYDROGEN CHLORIDE (HYDROCHLORIC ACID): CORROSIVE.
EFFECTS OF OVEREXPOSURE - EYE ACUTE: CONTACT MAY CAUSE SEVERE IRRITATION, CONJUNCTIVITIS, CORNEAL NECROSIS AND BURNS WITH IMPAIRMENT OR PERMANENT LOSS OF VISION. A DROP OF HYDROCHLORIC ACID SPLASHED IN THE EYE AND IMMEDIATELY WASHED OUT HAS PRODUCED A WHITE COAGULATION OF THE CORNEAL AND CONJUNCTIVAL EPITHELIUM. ANIMALS EXPOSED TO VAPOR CONCENTRATIONS OF 1350 PPM FOR ONE AND A HALF HOURS SHOWED CLOUDING OF THE CORNEA AND 300 PPM FOR 6 HOURS SHOWED SLIGHT EROSION OF THE CORNEAL EPITHELIUM. CONTACT WITH A COMPRESSED GAS MAY CAUSE FROSTBITE.
EFFECTS OF OVEREXPOSURE - EYE CHRONIC: ANIMALS EXPOSED TO VAPOR AT 100 PPM FOR 6 HOURS DAILY FOR 50 DAYS SHOWED ONLY SLIGHT UNREST AND IRRITATION OF THE EYES, BUT NO OCULAR INJURY. EFFECTS ARE DEPENDENT UPON CONCENTRATION AND DURATION OF EXPOSURE. CONJUNCTIVITIS OR EFFECTS SIMILAR TO THESE FOR ACUTE EXPOSURE MAY OCCUR.
EFFECTS OF OVEREXPOSURE - INHALATION: HYDROGEN CHLORIDE (HYDROCHLORIC ACID): CORROSIVE. 100 PPM IMMEDIATELY DANGEROUS TO LIFE OR HEALTH.
EFFECTS OF OVEREXPOSURE - INHALATION ACUTE: ACUTE EXPOSURE: INHALATION OF GAS OR FUMES AT LEVELS OF 5-35 PPM MAY CAUSE IRRITATION AND BURNING OF THE THROAT, COUGHING AND CHOKING; 50-100 PPM MAY BE BARELY TOLERABLE FOR 1 HOUR. HIGH LEVELS MAY CAUSE INFLAMMATION AND OCCASIONALLY ULCERATION OF THE NOSE, THROAT OR LARYNX, BRONCHITIS, PNEUMONIA, PALPITATIONS AND HEADACHE. HIGHER CONCENTRATIONS MAY CAUSE NECROSIS OF THE TRACHEAL AND BRONCHIAL EPITHELIUM, NASOSEPTAL PERFORATION, ATELECTASIS, EMPHYSEMA, DAMAGE TO PULMONARY BLOOD VESSELS AND LESIONS OF THE LIVER AND OTHER ORGANS. DEATH MAY BE DUE TO LARYNGEAL SPASM, BRONCHOPNEUMONIA OR PULMONARY EDEMA, 1300-2000 PPM MAY BE DANGEROUS, EVEN ON BRIEF EXPOSURES. REPRODUCTIVE EFFECTS HAVE BEEN REPORTED IN ANIMALS.
EFFECTS OF OVEREXPOSURE - INHALATION CHRONIC: REPEATED OR PROLONGED EXPOSURE MAY CAUSE EROSION AND DISCOLORATION OF EXPOSED TEETH, CHRONIC BRONCHITIS AND GASTRITIS.
EFFECTS OF OVEREXPOSURE - INGESTION: HYDROGEN CHLORIDE (HYDROCHLORIC ACID): CORROSIVE.
EFFECTS OF OVEREXPOSURE - INGESTION ACUTE: INGESTION OF THE ACID MAY

CAUSE BURNS OF THE MOUTH, THROAT, ESOPHAGUS AND STOMACH WITH CONSEQUENT PAIN, UNEASINESS, NAUSEA, SALIVATION, VOMITING, DIARRHEA, CHILLS, SHOCK AND INTENSE THIRST, NEPHRITIS, FEVER AND PERFORATION OF THE INTESTINAL TRACT, AND CIRCULATORY CALLIOPES MAY OCCUR. DEATH MAY BE DUE TO ESOPHAGEAL OR GASTRIC NECROSIS.
EFFECTS OF OVEREXPOSURE - INGESTION CHRONIC: NO DATA AVAILABLE.

SECTION 04: FIRST AID MEASURES

EMERGENCY FIRST AID PROCEDURES - SKIN: REMOVE CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH AFFECTED AREA WITH SOAP OR MILD DETERGENT AND LARGE AMOUNTS OF WATER UNTIL NO EVIDENCE OF CHEMICAL REMAINS (AT LEAST 15-20 -MINUTES). IN CASE OF CHEMICAL BURNS, COVER AREA WITH STERILE, DRY DRESSING. BANDAGE SECURELY, BUT NOT TOO TIGHTLY. GET MEDICAL ATTENTION IMMEDIATELY.
EMERGENCY FIRST AID PROCEDURES - EYES: WASH EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER, OCCASIONALLY LIFTING UPPER AND LOWER LIDS, UNTIL NO EVIDENCE OF CHEMICAL REMAINS (AT LEAST 15-20 MINUTES). CONTINUE IRRIGATING WITH NORMAL SALINE UNTIL THE PH HAS RETURNED TO NORMAL (30-60 MINUTES), COVER WITH STERILE BANDAGES. GET MEDICAL ATTENTION IMMEDIATELY.
EMERGENCY FIRST AID PROCEDURES - INHALATION: REMOVE FROM EXPOSURE AREA TO FRESH AIR IMMEDIATELY, IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. MAINTAIN AIRWAY AND BLOOD PRESSURE AND ADMINISTER OXYGEN IF AVAILABLE. KEEP AFFECTED PERSON WARM AND AT REST. TREAT SYMPTOMATICALLY AND SUPPORTIVELY, ADMINISTRATION OF OXYGEN SHOULD BE PERFORMED BY QUALIFIED PERSONNEL. GET MEDICAL ATTENTION IMMEDIATELY.
EMERGENCY FIRST AID PROCEDURES - INGESTION: DO NOT USE GASTRIC LAVAGE OR EMESIS. DILUTE THE ACID IMMEDIATELY BY DRINKING LARGE QUANTITIES OF WATER OR MILK. IF VOMITING PERSISTS, ADMINISTER FLUIDS REPEATEDLY. INGESTED ACID MUST BE DILUTED APPROXIMATELY 100 FOLD TO RENDER IT HARMLESS TO TISSUES. MAINTAIN AIRWAY AND TREAT SHOCK (DREISBACH, HANDBOOK OF POISONING, 12TH ED.). GET MEDICAL ATTENTION IMMEDIATELY. IF VOMITING OCCURS, KEEP HEAD BELOW HIPS TO HELP PREVENT ASPIRATION.

SECTION 4 - OTHER INFORMATION: ANTIDOTE: NO SPECIFIC ANTIDOTE. TREAT SYMPTOMATICALLY AND SUPPORTIVELY.

SECTION 05: FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR REGULAR FOAM (1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5). FOR LARGER FIRES, USE WATER SPRAY, FOG OR REGULAR FOAM (1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5).

SPECIAL FIRE FIGHTING PROCEDURES: MOVE CONTAINER FROM FIRE AREA IF YOU CAN DO IT WITHOUT RISK. APPLY COOLING WATER TO SIDES OF CONTAINERS THAT ARE EXPOSED TO FLAMES UNTIL WELL AFTER FIRE IS OUT. STAY AWAY FROM ENDS OF TANKS (1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5, GUIDE PAGE 60). EXTINGUISH USING AGENTS SUITABLE FOR TYPE OF FIRE. USE FLOODING AMOUNTS OF WATER AS FOG. COOL CONTAINERS WITH FLOODING AMOUNTS OF WATER, APPLY FROM AS FAR A DISTANCE AS POSSIBLE. AVOID BREATHING CORROSIVE VAPORS, KEEP UPWIND.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NEGLIGIBLE FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME.
NFPA CODES:
NFPA FLAMMABILITY CODE = 0

NFPA HEALTH CODE = 3
NFPA REACTIVITY CODE = 1

SECTION 5 - OTHER INFORMATION: CERCLA RATINGS: HEALTH=3, FIRE=0, REACTIVITY=1.

SECTION 06: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: SOIL SPILL: DIG HOLDING AREA SUCH AS LAGOON, POND OR PIT FOR CONTAINMENT. DIKE FLOW OF SPILLED MATERIAL USING SOIL OR SANDBAGS OR FOAMED BARRIERS SUCH AS POLYURETHANE OR CONCRETE. USE CEMENT POWDER OR FLY ASH TO ABSORB LIQUID MASS. NEUTRALIZE SPILL WITH SLAKED LIME, SODIUM BICARBONATE OR CRUSHED LIMESTONE. // AIR SPILL: KNOCK DOWN VAPORS WITH WATER SPRAY. KEEP UPWIND. WATER USED TO KNOCK DOWN VAPORS MAY BECOME CORROSIVE OR TOXIC AND SHOULD BE CONTAINED PROPERLY FOR LATER DISPOSAL. // WATER SPILL: NEUTRALIZE WITH AGRICULTURAL LIME, SLAKED LIME, CRUSHED LIMESTONE, OR SODIUM BICARBONATE. // OCCUPATIONAL SPILL: DO NOT TOUCH SPILLED MATERIAL. STOP LEAK IF YOU CAN DO IT WITHOUT RISK. FOR SMALL SPILLS, TAKE UP WITH SAND OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR LATER DISPOSAL. FOR SMALL DRY SPILLS, WITH CLEAN SHOVEL PLACE MATERIAL INTO CLEAN, DRY CONTAINER AND COVER. MOVE CONTAINERS FROM SPILL AREA. FOR LARGER SPILLS, DIKE FAR AHEAD OF SPILL FOR LATER DISPOSAL. KEEP UNNECESSARY PEOPLE AWAY. ISOLATE HAZARD AREA AND DENY ENTRY.

SECTION 07: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS WHEN STARING OR DISPOSING OF THIS SUBSTANCE. PROTECT AGAINST PHYSICAL DAMAGE. STORE IN COOL, WELL-VENTILATED PLACE, SEPARATED FROM ALL OXIDIZING MATERIALS (NFPA 49, HAZARDOUS CHEMICALS DATA, 1975). STORE AWAY FROM INCOMPATIBLE SUBSTANCES.

SECTION 08: EXPOSURE CONTROLS - PROTECTION

EYE PROTECTION: EMPLOYEE MUST WEAR SPLASH-PROOF OR DUST-RESISTANT SAFETY GOGGLES AND A FACESHIELD TO PREVENT CONTACT WITH THIS SUBSTANCE.

SKIN PROTECTION: EMPLOYEE MUST WEAR APPROPRIATE PROTECTIVE (IMPERVIOUS) CLOTHING AND EQUIPMENT TO PREVENT ANY POSSIBILITY OF SKIN CONTACT WITH THIS SUBSTANCE.

RESPIRATORY PROTECTION: THE FOLLOWING RESPIRATORS ARE RECOMMENDED BASED ON INFORMATION FOUND IN THE PHYSICAL DATA, TOXICITY AND HEALTH EFFECTS SECTIONS. THEY ARE RANKED IN ORDER FROM MINIMUM TO MAXIMUM RESPIRATORY PROTECTION. THE SPECIFIC RESPIRATOR SELECTED MUST BE BASED AN CONTAMINATION LEVELS FOUND IN THE WORK PLACE, MUST BE BASED ON THE SPECIFIC OPERATION, MUST NOT EXCEED THE WORKING LIMITS OF THE RESPIRATOR AND MUST BE JOINTLY APPROVED BY THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH AND THE MINE SAFETY AND HEALTH ADMINISTRATION (NIOSH-MSMA). THE FOLLOWING RESPIRATORS ARE RECOMMENDED BASED ON INFORMATION FOUND IN THE PHYSICAL DATA, TOXICITY AND HEALTH EFFECTS SECTIONS. THEY ARE RANKED IN ORDER FROM MINIMUM TO MAXIMUM RESPIRATORY PROTECTION. THE SPECIFIC RESPIRATOR SELECTED MUST BE BASED AN CONTAMINATION LEVELS FOUND IN THE WORK PLACE, MUST BE BASED ON THE SPECIFIC OPERATION, MUST NOT EXCEED THE WORKING LIMITS OF THE

RESPIRATOR AND MUST BE JOINTLY APPROVED BY THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH AND THE MINE SAFETY AND HEALTH ADMINISTRATION (NIOSH-MSHA). HYDROGEN CHLORIDE (HYDROCHLORIC ACID): 50 PPM: ANY SUPPLIED-AIR RESPIRATOR. ANY SELF-CONTAINED BREATHING APPARATUS. ANY CHEMICAL CARTRIDGE RESPIRATOR WITH CARTRIDGES PROVIDING PROTECTION AGAINST HYDROCHLORIC ACID. 100 PPM: ANY SUPPLIED-AIR RESPIRATOR OPERATED IN A CONTINUOUS FLOW MODE. ANY SUPPLIED-AIR RESPIRATOR WITH A FULL FACEPIECE. ANY SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE. ANY AIR-PURIFYING, FULL-FACEPIECE RESPIRATOR (GAS MASK) WITH A CHIP-STYLE, FRONT-, OR BACK- MOUNTED CANISTER PROVIDING PROTECTION AGAINST HYDROCHLORIC ACID. ANY CHEMICAL CARTRIDGE RESPIRATOR WITH A FULL FACEPIECE AND CARTRIDGES PROVIDING PROTECTION AGAINST HYDROCHLORIC ACID. ANY POWERED, AIR-PURIFYING RESPIRATOR WITH CARTRIDGES PROVIDING PROTECTION AGAINST HYDROCHLORIC ACID. ESCAPE: ANY AIR-PURIFYING, FULL FACEPIECE RESPIRATOR (GAS MASK) WITH A CHIN-STYLE, FRONT- OR BACK-MOUNTED ACID GAS CANISTER. ANY APPROPRIATE ESCAPE-TYPE SELF-CONTAINED BREATHING APPARATUS. FOR FIREFIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS: ANY SELF-CONTAINED BREATHING APPARATUS THAT HAS A FULL FACEPIECE AND IS OPERATED IN A PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE. ANY SUPPLIED-AIR RESPIRATOR THAT HAS A FULL FACEPIECE AND IS OPERATED IN A PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MADE IN COMBINATION WITH AN AUXILIARY SELF-CONTAINED BREATHING APPARATUS OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE.

VENTILATION: PROVIDE LOCAL EXHAUST VENTILATION SYSTEM TO MEET PUBLISHED EXPOSURE LIMITS.

PERSONAL PROTECTIVE EQUIPMENT: WHERE THERE IS ANY POSSIBILITY THAT AN EMPLOYEE'S EYES AND/OR SKIN MAY BE EXPOSED TO THIS SUBSTANCE, THE EMPLOYER SHOULD PROVIDE AN EYE WASH FOUNTAIN AND QUICK DRENCH SHOWER WITHIN THE IMMEDIATE WORK AREA FOR EMERGENCY USE.

SECTION 8 - OTHER INFORMATION: HYDROGEN CHLORIDE: 10 PPM (15.4 MG/M3)DFG MAK 5 MINUTE PEAK, MOMENTARY VALUE, 8 TIMES/SHIFT // MEASUREMENT METHOD: SILICA GEL TUBE; SODIUM BICARBONATE/SODIUM CARBONATE; ION CHROMATOGRAPHY; (NIOSH VOL. III # 7903, INORGANIC ACIDS).

PROTECTIVE GLOVES (SPECIFY TYPE): RUBBER EMPLOYEE MUST WEAR APPROPRIATE PROTECTIVE GLOVES TO PREVENT CONTACT WITH THIS SUBSTANCE. RUBBER NITRILE, NEOPRENE, VITON OR HYPHALON GLOVES RECOMMENDED.

SECTION 09: PHYSICAL & CHEMICAL PROPERTIES

BOILING POINT TEMPS: = 196.00C/ 384.00F

SPECIFIC GRAVITY VALUES: = 1.2000

VAPOR DENSITY VALUES: = 1.3000
VAPOR PRESSURE TEXT: NOT AVAILABLE

SOLUBILITY IN WATER TEXT: SOLUBLE

PH NUMBER SOLUTION VALUES: = 1.1000
PH NUMBER SOLUTION TEXT: (0.1 N)

APPEARANCE: COLORLESS OR SLIGHTLY YELLOW FUMING LIQUID

ODOR: PUNGENT ODOR.

MOLECULAR WEIGHT VALUES: = 36.4600

SECTION 10: STABILITY & REACTIVITY

STABILITY - TEXT: REACTS EXOTHERMICALLY WITH WATER OR STEAM TO PRODUCE TOXIC AND CORROSIVE FUMES.

INCOMPATIBLE MATERIALS: HYDROGEN CHLORIDE (HYDROCHLORIC ACID): ACETIC ANHYDRIDE: VIOLENT REACTION. // ALCOHOLIC HYDROGEN CYANIDE: EXPLOSIVE REACTION. // ALUMINUM: EXPLOSION. // ALUMINUM-TITANIUM ALLOYS: IGNITES OR INCANDESCES WHEN HEATED. // 2-AMINOETHANOL: VIOLENT REACTION. // AMMONIUM HYDROXIDE: VIOLENT REACTION. // BASES: VIOLENT REACTION. // BRASS: CORRODES. // BRONZE: CORRODES. // CALCIUM CARBIDE: REACTS WITH INCANDESCENCE. // CALCIUM HYPOCHLORITE: IGNITION. // CESIUM ACETYLENE: IGNITES ON CONTACT. // CHLORINE + DINITROANILINES: VIGOROUS REACTION WITH RELEASE OF FLAMMABLE HYDROGEN GAS FUMES. // CHLOROSULFONIC ACID: VIOLENT REACTION. // 1,1-DIFLUOROETHYLENE: EXTREMELY EXOTHERMIC DECOMPOSITION REACTION. // DOWICIL 100: DECOMPOSES. // ETHYLENE DIAMINE: VIOLENT REACTION. // ETHYLENE IMINE: VIOLENT REACTION. // FLUORINE: IGNITES ON CONTACT. // HEXALITHIUM DISILICIDE: INCANDESCES. // IRON: CORRODES WITH EVOLUTION OF FLAMMABLE HYDROGEN GAS. // MAGNESIUM BORIDE: PRODUCES A SPONTANEOUSLY FLAMMABLE GAS. // MERCURIC SULFATE: VIOLENT REACTION AT 125 C. // METAL ACETYLIDES: VIOLENT REACTION. // METALS: SEVERE CORROSION WITH EVOLUTION OF FLAMMABLE HYDROGEN GAS. // OLEUM: VIOLENT REACTION. // OXIDIZERS (STRONG): VIOLENT REACTION. // OXYGEN + PLATINUM: IGNITES ON CONTACT. // PERCHLORIC ACID: VIOLENT REACTION. // PLASTICS, RUBBER, COATINGS: ATTACKS. // POTASSIUM PERMANGANATE: EXPLOSION HAZARD. // BETA-PROPIOLACTONE: VIOLENT REACTION. // PROPYLENE OXIDE: VIOLENT REACTION. // RUBIDIUM ACETYLENE: IGNITES ON CONTACT. // SILICA (GEL): INCOMPATIBLE. // SODIUM: VIGOROUS OR EXPLOSIVE REACTION. // SULFURIC ACID: EXPLOSIVE REACTION WITH RELEASE OF TOXIC HYDROGEN CHLORIDE GAS. // TETRASELENIUM TETRA NITRIDE: EXPLODES AN CONTACT. // VINYL ACETATE: VIOLENT REACTION.

HAZARDOUS DECOMPOSITION PRODUCTS: THERMAL DECOMPOSITION MAY RELEASE CORROSIVE HYDROGEN CHLORIDE.

HAZARDOUS POLYMERIZATION TEXT: HAZARDOUS POLYMERIZATION HAS NOT BEEN REPORTED TO OCCUR UNDER NORMAL TEMPERATURES AND PRESSURES.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA UNLIMITED TEXT: LOCAL EFFECTS: CORROSIVE-INHALATION, SKIN, EYE AND INGESTION. ACUTE TOXICITY LEVEL: MODERATELY TOXIC BY INHALATION, INGESTION. TARGET EFFECTS: NO DATA AVAILABLE.

EYE EFFECTS: HYDROGEN CHLORIDE (HYDROCHLORIC ACID); IRRITATION DATA: ANHYDROUS: 100 MG RINSED EYE--RABBIT MILD. HYDROCHLORIC ACID: 5 -MG/30 SECONDS RINSED EYE-RABBIT MILD.

ACUTE ORAL EFFECTS: ORAL-RABBIT LD50; 1449 MG/KG INTRAPERITONEAL-MOUSE LD50; 81 MG/KG UNREPORTED--MAN LDLO

ACUTE INHALATION EFFECTS: HYDROGEN CHLORIDE (ANHYDROUS GAS): 4701

PPM/30 MINUTES INHALATION-RAT LC50,: 2644 PPM/30 MINUTES INHALATION-MOUSE LC50, MONOHYDRATE: NO DATA AVAILABLE. DEHYDRATE: NO DATA AVAILABLE. TRIHYDRATE: NO DATA AVAILABLE. HEXAHYDRATE: NO DATA AVAILABLE. HYDROGEN CHLORIDE (AEROSOL): 666 PPM/30 MINUTES INHALATION-RAT LC50; 2142 PPM/30 MINUTES INHALATION-MOUSE LC50. HYDROCHLORIC ACID: 1300 PPM/30 MINUTES INHALATION-HUMAN LCLO; 3000 PPM/5 MINUTES INHALATION-HUMAN LCLO; 3124 PPM/1 HOUR INHALATION-RAT LC50; 1108 PPM/1 HOUR INHALATION-MOUSE LC50; 4413 PPM 130 MINUTES INHALATION-RABBIT LCLO; 4413 PPM/30 MINUTES INHALATION-GUINEA PIG I-CLA; 900 MG/KG.

CARCINOGENICITY: HUMAN INADEQUATE EVIDENCE, ANIMAL INADEQUATE EVIDENCE (IARC GROUP).

MUTAGENICITY: MUTAGENIC DATA (RTECS); REPRODUCTIVE EFFECTS DATA (RTECS).

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 40 CFR 262, EPA HAZARDOUS WASTE NUMBER D002. 100 POUND.

SECTION 13 - OTHER INFORMATION: CONDITIONS TO AVOID: MAY BURN BUT DOES NOT IGNITE READILY. FLAMMABLE, POISONOUS GASES MAY ACCUMULATE IN TANKS AND HOPPER CARS. MAY IGNITE COMBUSTIBLES (WOOD, PAPER, OIL, ETC.).

SECTION 14: TRANSPORT INFORMATION

DOT INFORMATION: U.S. DEPARTMENT OF TRANSPORTATION SHIPPING NAME-ID NUMBER, 49 CFR 172.101: HYDROCHLORIC ACID, SOLUTION-UN 1789. // U.S. DEPARTMENT OF TRANSPORTATION HAZARD CLASS OR DIVISION, 49 CFR 172.101: 8 - CORROSIVE MATERIAL. // U.S. DEPARTMENT OF TRANSPORTATION PACKING GROUP, 49 CFR 172.101: PG II. // U.S. DEPARTMENT OF TRANSPORTATION LABELING REQUIREMENTS, 49 CFR 172.101 AND SUBPART E; CORROSIVE. // U.S. DEPARTMENT OF TRANSPORTATION PACKAGING AUTHORIZATIONS: EXCEPTIONS: 49 CFR 173.154. // NON-BULK PACKAGING: 49 CFR 173.202. // BULK PACKAGING: 49 CFR 173.242. // U.S. DEPARTMENT OF TRANSPORTATION QUANTITY LIMITATIONS 49 CFR 172,101: PASSENGER AIRCRAFT OR RAILCAR: 1 1. // CARGO AIRCRAFT ONLY: 30 1

TDG CLASSIFICATION: REGULATED

SECTION 15: REGULATORY INFORMATION

SECTION 15 - OTHER INFORMATION: HYDROGEN CHLORIDE: 500 POUNDS SARA SECTION 3040 THRESHOLD PLANNING QUANTITY (GAS). // HYDROGEN CHLORIDE: 5000 POUND SARA SECTION 304 REPORTABLE QUANTITY (GAS). // 5000 POUNDS OSHA PROCESS SAFETY MANAGEMENT THRESHOLD QUANTITY (GAS). // SUBJECT TO SARA SECTION 313 ANNUAL TOXIC CHEMICAL RELEASE REPORTING

Attachment B

Sample Written Notification

On plant letterhead

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Date:

SAMPLE

Duty Officer
National Response Center
Commandant G-TGC-2
2100 Second St. SW
Washington D.C., 20593

RE: Report No._____

Dear Duty Officer __name

This letter confirms the telephone notification made by name on date at time. Additional notifications were also made to state and local agencies immediately following the call to you.

On October 1, 1893, at 10:00 am two barrels of oil were spilled during unloading at the General Motors Horseless Carriage Assembly Plant. The oil flowed to the nearest storm basin which drains into the Call Drain. Responding personnel immediately used shovels, sandbags and a boom to prevent oil from reaching the Flint River.

The amount of oil remaining in the ruptured barrels was approximately 50 gallons. The amount of oil contained and recovered from the spill site was approximately 10 gallons. It is estimated that approximately 40 gallons reached Call Drain. The recovered oil will be shipped to a reclamation center across town.

Neighboring cattle ranchers were notified of the incident and advised not to allow their animals near the Call Drain until General Motors and its contractors can completely remediate the site. General Motors will continue to monitor Call Drain and Flint River on a daily basis. Cleanup personnel will be available during the next rain event.

The following information summarizes the report as given to Duty Officer name.

Name of person reporting incident:

Thomas Q. Edison

Name, address and identification number of facility:

General Motors - Horseless Carriage Assembly
2238 W. Bristol Rd.
Flint, MI. 48553

Phone number where person reporting the spill can be reached:

810-555-4450

Date, time and location of incident:

October 1, 1893
10:00 am
North of assembly plant next to powerhouse.

Quantity and type of material released:

Approximately 50 gallons of oil

Extent of injuries, if any: **None**

Brief description of incident, nature of hazardous material involvement, and possible threats to human health and the environment outside the facility:

See narrative on page 1 of this report.

The following corrective actions will be implemented immediately. A review of the standard operating procedures will be reviewed with all loading/unloading personnel. General Motors will place containment equipment near material transfer areas.

If you have any questions or concerns relative to this matter, please contact plant environmental engineer at phone number.

Thank you for your attention to this matter.

Sincerely,

Plant Manager

Attachment C

Spill Report Form

GM POWERTRAIN BEDFORD PLANT * INDICATES REVISION REVISER Kim Dobosenski	EMERGENCY RESPONSE *Internal Spill/Release Report	FORM NO. 5523-10(A) DATE ISSUED 9/24/98 REVISION # 1 REVISION DATE: 1/19/99

TO BE COMPLETED BY SECURITY AND/OR ENVIRONMENTAL PERSONNEL

1. Name, Phone Number of Caller: _____

   GM Employee? ____ Yes ____ No If No, Identify _____

2. Date and Time of Call:

3. Date and Time of Incident (Estimate):

4. Exact Location of Incident:

5. Type of Incident Being Reported:

   Spill ____ Fire ____ Explosion ____ Other _____

6. Discharge to : Interior Bldg. _____ Exterior Containment _____

   Sewer System _____ Surface Water _____ Atmospheric Release _____

   Ground _____ Other _____

7. Did the material leave GM Property?: Yes ____ No ____ Unknown ____

8. Types (or name) of materials involved (if known, be specific):

9. Quantities of materials involved (Estimate):

10. What is the source of the spill?:

11. Is material continuing to be released?:

12. What actions, if any, have been taken to contain or clean up materials?:

13. Any Injuries?:

***ENVIRONMENTAL USE ONLY**

14. Did the *Release Plan* and any applicable emergency response procedures appropriately address the Incident?: Yes ____ No ____ If No, explain deficiency *(use back of form if necessary):*

Explain necessary revisions to the Plan to address future Incidents *(use back of form if necessary):*

Print Name: _____ Time: _____

Signature: _____ Date: _____

Note: If this form was initiated by Security Personnel, please submit to the Environmental Department for completion and record retention.

GM POWERTRAIN BEDFORD PLANT * INDICATES REVISION REVISER	EMERGENCY RESPONSE External Spill/Release Report	FORM NO. 5523-10(C) DATE ISSUED 1/22/99 REVISION # 0 REVISION DATE:

Environmental Audit Report: Privileged Information

TO BE COMPLETED BY ENVIRONMENTAL PERSONNEL ONLY

Division NAO: X Other: _____ EPA ID#: IND006036099 GMBA#: 550924 (51050)

Plant Name: GMPT Bedford Plant Address: 105 GM Drive, Bedford, IN 47421

Reported to Agencies By: _____ Report Date/Time: _____

Phone Number: _____ Names of Plant Response Personnel Contacted: _____

_____

Date of Incident: _____ Time (*am/pm*): _____ Released During Production Hours (*yes / no / unk.*): _____

Duration of Release (*minutes, hours, days, etc.*): _____ Material: _____

CHRIS Code: _____ How Discovered: _____

_____

Location of Loss Material (*be specific*): Bldg #: _____ Floor: _____ Bay#: _____

Outside of Plant (*be specific*): _____

Amount Spilled/Released: _____ Concentration: _____

Reportable Quantity (*in pounds*): _____ Exceeded RQ (*yes/no*): _____ RQ Substance: _____

Receiving Stream: _____

Describe the event (*include the type of equipment and other details*): _____

_____

_____

_____

Describe weather condition (*precipitation, wind, temperature, and other details*): _____

Spill /Release Reached (*check applicable*):

1) Storm Sewer: GM ___ Non GM ___ 2) Surface Water: GM ___ Non-GM ___

3) Sanitary Sewer: GM ___ Non GM ___ 4) Combined Sewer: GM ___ Non-GM ___

5) Publicly owned Treatment Works: ___ 6) Groundwater: _____ 7) Soil: ____

8) Industrial Wastewater Treatment Plant: ___ 9) Ambient Air: ____ 10) Other: (*describe below*)

_____

GM POWERTRAIN BEDFORD PLANT * INDICATES REVISION REVISER	EMERGENCY RESPONSE External Spill/Release Report	FORM NO. 5523-10(C) DATE ISSUED 1/22/99 REVISION # 0 REVISION DATE:

Action Taken:

Material was contained (yes/no): _____ Estimate amount of material contained (*e.g., gal., lb., %*): _____

Describe containment/effort made: _____

_____

_____

Material lost (*yes/no*): _____ Estimate amount of material lost (*e.g., gal., lb., %*): _____

Total injuries (*i.e., #*): _____ Known health affects (*describe*): _____

IMMEDIATE Notification: Report for Information Only (*no RQ exceeded*): _____

Agency	Contact Person	Phone Number	Date	Time	Report Number
NRC:					
State:					
Local:					

GM NOTIFICATION:

Department	Contact Person	Phone #	Date	Time	Report Number
Plant Manager:					
GM Legal:					
GM EES:					
DAS/NAO Div.:					
Plant PR:					
Division PR:					

Attachment D

GM Procedures for Disposal of Wastes

Note: This attachment may <u>not</u> contain the most current versions of these procedures! Before using the procedures verify with the Plant Master List of Procedures that these procedures are current. If not, obtain a current copy from the Quality Department or the shared "S" drive (S:\QS9000sn), which is available on most computers within the facility.

GM POWERTRAIN BEDFORD PLANT * INDICATES REVISION REVISER: Ken Hackney Requested By: R. Simmerman	**STANDARD PROCEDURE** *STORAGE AND DISPOSAL OF *USED* FLUIDS AND OILS UNCONTROLLED COPY	PROC. NO. 5533-18 DATE ISSUED 9-8-76 REVISION # 9 REVISION DATE 6/5/00

PURPOSE:

*Used fluids from plant sources may be recycled or may contain regulated contaminates requiring disposal in accordance with applicable local, state and federal regulations. This procedure provides a safe and structured method for proper transporting, storage and disposal of *used* fluids, hydraulic oils, cutting fluids and lubricants *at the Bedford Plant.*

SCOPE:

*This procedure applies to all used hydraulic fluids, oils and lubricants. In addition, all *used* fluids removed *from* plant machinery and reservoirs are covered by this procedure.

RESPONSIBILITY:

*The PC&L and the Environmental Management Departments, working with the Resource Manage*ment Team*, have direct responsibility as outlined in this procedure. All other departments must meet the requirements of this procedure for Storage and Disposal of *Used* Fluids and Oils.

DOCUMENT CONTROL:

Document	Location	Retention
Proc 5533-18	Document Control Center	5 years from obsolescence

REFERENCES:

Procedure 5533-14, Compliance with DOT and EPA Material Shipping Regulations for Hazardous Materials
Job Instruction 5581-05, Waste Stream Inspections
CFR Title 49

PROCEDURE:

*1.0 Any person having *used* fluid for disposal should take the material to one of the locations established for the temporary storage of *used* fluids and transfer *the* fluid into the appropriate container.

*2.0 Any person having a question concerning *used* fluid disposal that is not answered in this procedure should contact the Resource Manage*ment Team* @ 7144.

3.0 Different types of fluids are not to be mixed within containers. Example: Water base fluids such as hydraulic fluid should not be mixed with mineral based fluids such as motor oil.

*4.0 *Used* fluids, *at the Bedford Plant,* have been defined and segregated into *two* types with a corresponding color code.

4.1 MINERAL BASE FLUIDS - YELLOW
*4.2 *GLYCOL BASE FLUIDS / WATER BASE FLUIDS - BLACK*

*5.0 It will be the responsibility of the Resource Manage*ment Team* to insure each drum is labeled before placing in *the* temporary *used* fluid storage location*s*.

*5.1 The label must be placed on the upper one-third of the container covering any existing, identification, but not on the lid. Standard labels for each of the *two* fluid types are maintained by the Resource Manager.

5.2 All drums containing mineral based fluids are labeled "USED OIL".

*6.0 A PC&L truck driver will be assigned to check each temporary *used* fluid storage location*s* daily.

6.1 When a funnel has been moved from the front drum on the pallet to the rear drum on the pallet and the bung has been replaced in the front drum, this will constitute a "pull signal" for the driver from PC & L to take the full drum to the designated waste management area.

6.2 PC&L is responsible to replace the full drum with a properly labeled empty drum on the waste containment pallet. The empty drum will be placed on the rear of the pallet and the drum being filled moved to the front position on the pallet.

*6.3 All *used* fluids will be held within the designated waste management storage area on waste containment pallets.

*7.0 The environmental coordinator or designated representative will determine the proper method of disposal */ recycling* and the appropriate *disposition* site for removal of used oils and fluids from the plant premises.

*7.1 Mineral based fluids will be held within designated storage areas until shipped.

*7.2 Glycol and water base fluids will be delivered to the waste*water* treatment facility on site.

**8.0* *Analytical analysis to support the waste characterization of the used fluids is to be performed at least annually by the Resource Management Team.*

9.0* Shipment of *used* fluids must be in compliance with the **P C & L procedure 5533-14, Compliance with DOT and EPA Material Shipping Regulations for Hazardous Materials, which includes requirements of the Hazardous Materials Shipping Act and **CFR TITLE** 49.

APPROVED BY:

ENVIRONMENTAL SYSTEMS MANAGER DATE

P C & L MANAGER DATE

GM POWERTRAIN BEDFORD PLANT *INDICATES REVISION REVISER: Ken Hackney Requested By: R.Simmerman	STANDARD PROCEDURE DISPOSAL OF SOLID WASTE UNCONTROLLED COPY	PROC. NO. 5533-28 DATE ISSUED 6/21/82 REVISION # 12 REVISION DATE 12/14/00

PURPOSE:

To identify a safe and structured method for proper collection, segregation, transportation and disposal of solid waste material and to support waste minimization and recycling.

SCOPE:

Any solid waste material generated by the facility.

RESPONSIBILITY:

P C & L - 5533
Maintenance - 5534
Environmental Engineering- 5581
Resource Management Team
All departments generating solid waste.

DOCUMENT CONTROL:

Document	Location	Retention
Proc 5533-28 Solid Waste Disposal Matrix Form 5533-28 (A)	Document Control Center Environmental Engineering	5 years from obsolescence until obsolescence

REFERENCE:

Procedure 5533-32 Storage, Handling, and Disposal of Chip System Afterburner Material and Baghouse Dust
Environmental Job Instruction 5581-05, Waste Stream Inspections
Procedure 5581-08 Waste Minimization Procedure
Procedure 5532-04 Concrete and / or Soil Removal
Maintenance Department Job Instruction 5534-4003, Handling or Waste Lamps, Bulbs, and Aerosol cans
PC&L Job Instruction 5533-61, Control of Aerosol Cans Within the Bedford Plant
Procedure 5533-18 Storage and Disposal of Used Fluids and Oils

PROCEDURE:

1.0 Each department will be responsible for establishing and maintaining a fixed location designated for solid waste collection.

1.1 P C & L is responsible for maintaining solid waste management areas in all departments except maintenance.

1.2 Each department is responsible for the housekeeping in the area where the solid waste hoppers are located.

2.0 It is the responsibility of each department to insure that liquid waste is NOT in containers/hoppers designated for solid waste. If free liquid is observed in any solid waste container, it must be reported to the Resource Management Team for proper disposition.

3.0 Every employee in the plant has the opportunity and should be encouraged to play an active role in minimizing the environmental impact of solid waste disposal by placing solid waste material in the appropriate container as defined by the waste management sign and/or color code.

4.0 It is the responsibility of the PC&L Department to develop and maintain signs and color code standards for each identified solid waste stream as appropriate.

5.0 The Solid Waste Disposal Matrix 5533-28(A) identifies the various solid wastes and the appropriate disposal / recycling facilities where the materials are to be sent. This matrix is maintained by the Environmental Engineering Staff.

6.0 Concrete / soil demolition material shall be tested and disposed of in accordance with Procedure 5532-04 Concrete and / or Soil Removal .

7.0 Chip System afterburner material and chip system dust collect bags must be handled in accordance with Procedure 5533-32.

8.0 Asbestos removed by contractors may be disposed of at sites other than those listed on the 5533-28(A) matrix if disposal is handled by the contracted firm and the location has been approved by the Environmental department.

9.0 Recycling

9.1 Fluorescent light bulbs, high pressure sodium lamps, metal halide lamps, mercury vapor and incandescent bulbs are to be handled in accordance with Maintenance Job Instruction 5534-4003.

9.1.1 It is the responsibility of the electricians to place used bulbs, upon removal from operation, in the packaging from which the new, replacement bulbs were removed whenever practicable.

9.1.2 Used bulbs should then be placed in the BLUE containers for recycling universal waste labeled "Used Mercury Containing Lamps". The container lid is to remain closed except when adding or removing bulbs. There are two designated used light bulb storage areas; one in the Pistons Department and one in the electrical element rebuild area.

9.1.3 When full, the Blue containers are to be delivered to the sundry ship area to prepare the bulbs for shipment. Applicable manifesting, packaging, and labeling requirements must be met prior to shipment.

9.2 Alkaline, Nickel-Cadmium, and Lithium Batteries are designated as a universal waste.

9.2.1 Used alkaline, Ni-Cd, and Lithium batteries can be placed in the used battery collection containers located at the Ferguson delivery stations for recycling.

9.2.2 Batteries from these collection sites are periodically collected and accumulated in the PC&L department for later shipment to recycling. Applicable manifesting, packaging, and labeling requirements must be met prior to shipment.

9.3 Scrap Iron & Steel

9.3.1 Scrap Iron & Steel weighing less than 2000 lbs., copper, brass, etc. are to be collected & segregated in the designated waste management containers for shipment.

9.3.2 Scrap iron and steel weighing more than 2000 lbs. (e.g., die covers, ejectors, etc.) requires special handling and transportation arrangements. Disposal must be approved and coordinated through the PC&L Department & the Resource Management Team.

9.4 Lead-acid batteries become a waste stream when removed from fork trucks and other mobile equipment by the garage mechanics.

9.4.1 Garage mechanics are to place used 6V & 12V lead-acid batteries in designated containers provided by PC&L.

9.4.2 Garage mechanics are to notify PC&L when a fork truck battery (36V or 48V) is removed from service and becomes available for shipment.

9.4.3 Applicable manifesting, packaging, and labeling requirements must be met prior to shipment.

9.5 Oil filter disposal

*9.5.1 *All filters must be allowed to sufficiently drain into a recovery unit (no free flowing liquids remaining, 12 hours of draining is recommended) immediately after removal from service. Motor oil filters are to drain "hot" meaning near engine operating temperature and above 60 degrees Fahrenheit.*

*9.5.2 *Garage mechanics are to crush the drained used motor oil filters using the "oil filter crusher". Draining after crushing is also recommended.*

*9.5.2.1 *Properly drained and crushed used motor oil filters become recyclable steel and are to be placed in the appropriate green hopper for scrap metal.*

*9.5.3 *Paper media filters must be placed in a black drum or hopper labeled to accept oil filters (i.e. "Used Oil Filters" drum or "Housekeeping Waste" hopper) after proper draining.*

9.5.4 The used oil drained from the filters is to be handled in accordance with procedure 5533-18, Storage and Disposal of Used Fluids and Oils.

9.6 Proper Disposal of Aerosol Cans – In order to prevent potentially explosive materials from being charged in our melting furnaces, it is necessary that we maintain control over the usage and disposal of aerosol pressurized spray cans in the plant. (Reference Maintenance Job Instruction 5534-4003 and PC&L Job Instruction 5533-61).

9.6.1 Only materials approved by the HMCC can be used in the plant.

9.6.2 Aerosol cans are distributed on a one for one exchange from PC&L. Additionally, any aerosol cans ready for disposal, full or empty, must be turned in to the PC&L department.

9.6.3 Aerosol cans punctured in the AEROSOLV aerosol can recycling station may be recycled with other scrap steel.

9.7 Wood pallet disposal

*9.7.1 Wood pallets are to be collected and loaded *onto* a trailer for recycling.

9.7.2 Pallets must be in a condition acceptable for recycling. (i.e. , not oil soaked or covered with paint)

9.8 Kitchen grease is collected in a special closed semi-bulk dump container located outside, west of the Tool Room, per the recyclers handling requirements.

10.0 Any department having a question about any solid waste material and its proper disposition should contact the Resource Management Team @ 7144.

11.0 It is the responsibility of the Resource Management Team to conduct testing as necessary on waste materials to properly define waste streams and assist the Environmental Department in completing waste profiles as required for disposal.

12.0 It is the responsibility of the Resource Management Team to conduct periodic inspections and maintain appropriate records of these inspections as defined in Job Instruction 5581-05, Waste Stream Inspections.

13.0 The Resource Management Team acting under the direction of the Environmental Department has the responsibility to oversee the proper disposition of all Solid Waste materials.

Approved By:

Production Manager Date

PC & L Manager Date

Maintenance Systems Manager Date

Environmental Manager Date

Attachment E

Bedford Public Relations Guidelines

Note: This attachment may not contain the most current version of the guidelines! Before using these guidelines verify with the facility Disaster Preparedness Plan that the guidelines are the most current.

BUILDING EMERGENCY INFORMATION COORDINATOR

The Public Relations Coordinator, in conjunction with the Personnel Director, are designated as the Emergency Information Coordinators. These people are responsible for performing the information functions.

Primary Responsibilities:

1. Obtain verified disaster-related information.

2. Prepare and issue news statements to the media.

3. Establish a media center (as necessary) during a building emergency situation/disaster to coordinate emergency information and brief the media (see emergency numbers, page 42).

4. Coordinate with local government authorities to establish a joint public information center (JPIC). Conduct press conferences and issue news statements during an extended or large scale emergency situation.

Attachment F

Inspection Forms

Note: The inspection forms included in this section are for example purposes only and are not necessarily the most current version. The most current version of the inspection forms can be obtained by contacting the respective department in charge of conducting the inspections.

Form 5581-05 (A): GMPT - Bedford Weekly Inspection Report for the Waste Storage Area

Location Waste Management Area

References
Resource Manager Specifications
Procedure 5533-18 Storage and Disposal of Waste Fluids and Oils
Procedure 5533-14 Compliance with DOT and EPA Material Shipping Regulations for Hazardous Materials

Directions Check each line item listed below that applies. Corrective actions shall be recorded in the space provided at the end of this form.

General Area

	YES	NO
Is the general appearance of the area good?	___	___
Are drain grates clear and free of debris?	___	___
*Is containment pad free of significant cracks or deterioration?	___	___
*Is the pad free of any liquid build-up? (from precipitation/leaks)	___	___
*Is a spill kit accessible?	___	___
*Is an emergency phone accessible and operable?	___	___

Drum Storage

Number of Non-Hazardous Waste drums _____ Number of empty drums _____
Are all drums properly segregated? (Y/N) _____

Non-Hazardous Waste Drums	YES	NO ⇒ No.		N/A
Are all drums stored under a roof?	___	___	___	___
*Are all drums in good condition and not leaking?	___	___	___	___
*Are all drums closed?	___	___	___	___
*Are all drums labeled and readable?	___	___	___	___
*Are all drums placed on a containment pad?	___	___	___	___

Cylinder Storage - (Report problems to Safety Department)

	YES	NO ⇒ No.		N/A
*Are all cylinders properly stored upright?	___	___	___	___
*Are all cylinders properly secured in place?	___	___	___	___
*Are all cylinders labeled?	___	___	___	___
*Are all cylinders free of any evidence of leakage?	___	___	___	___
*Are all caps secured on cylinders?	___	___	___	___

"GOOD" condition means that the container is not rusted, have structural defects or leak.

* These are high priority items. If corrective action is required, actions should be initiated immediately. All other line items represent opportunities for improvement and should be reported to the appropriate departmental supervisor.

Comments / Corrective Actions

_____

_____

_____

_____

Date of Inspection _____
Time of Inspection _____
Name of Inspector _____

This weekly inspection report shall be retained by the Resource Manager for a minimum of five years or open tax year, whichever is longer.

Form 5581-05 (B): GMPT - Bedford Weekly Inspection Report for Hazardous Waste

Location Waste Management Area

References

Procedure 534-4002	Maintenance - Waste Solvent Handling, Storage, and Disposal
Procedure 5533-14	Compliance with DOT and EPA Material Shipping Regulations for Hazardous Materials

Directions Check each line item below that applies. Corrective actions shall be recorded in the space provided at the end of this form.

Number of Hazardous Waste drums _____

	YES	NO	N/A
*Is the storage cabinet in good condition?	____	____	____
*Are all drums in good condition and not leaking?	____	____	____
*Are all bungs securely closed?	____	____	____
*Do all drums meet DOT/UN specifications?	____	____	____
*Are all drums labeled properly as "Hazardous Waste"?	____	____	____
*Is the accumulation start date listed on each and less than 90 days?	____	____	____
*Has the required 2 foot space been maintained for emergency access to the cabinet?	____	____	____
*Is a spill kit accessible?	____	____	____
*Is a fire extinguisher accessible?	____	____	____
*Is an emergency phone accessible and operable?	____	____	____
*Is the following current information posted at the emergency phone?	____	____	____

- name and phone number of the emergency coordinator
- location of fire extinguishers and spill control material
- phone number for fire or other emergencies

"GOOD" condition means that the container is not rusted, have structural defects or leak.

*These are high priority items. If corrective action is required, actions should be initiated immediately.

Comments / Corrective Actions

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Date of Inspection _____

Time of Inspection _____

Name of Inspector _____

This weekly inspection report shall be retained by the Resource Manager for a minimum of five years or open tax year, whichever is longer.

Form 5581-05 (C): GMPT - Bedford Weekly Inspection Report for the Waste Paint Solvent Satellite Accumulation Area

Location Maintenance Area/Paint Booth

Reference
Resource Manager Specifications
Procedure 534-4002 Maintenance - Waste Solvent Handling, Storage and Disposal Procedures

Directions Check each line item listed below that applies. Corrective actions shall be recorded in the space provided at the end of this form.

	YES	NO	N/A
*Is the drum in good condition and not leaking?	____	____	____
*Is the drum labeled "Hazardous Waste"?	____	____	____
*Does the drum meet DOT/UN specifications?	____	____	____
*Is the drum closed unless currently being filled?	____	____	____
*Is an emergency phone accessible and operable?	____	____	____
Is the 7333 emergency number posted at the phone?	____	____	____
*Is a spill kit accessible?	____	____	____
*Is a fire extinguisher accessible?	____	____	____
Are all paint booth filters properly in place?	____	____	____
What percent (estimate) of drum is full?	_____		
*If full, is the drum dated and less than 3 days from today's date?	____	____	____

"GOOD" condition means that the container is not rusted, have structural defects or leak.

* These are high priority items. If corrective action is required, actions should be initiated immediately. All other line items represent opportunities for improvement and should be reported to the appropriated departmental supervisor.

Comments / Corrective Actions

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Date of Inspection _____
Time of Inspection _____
Name of Inspector _____

This weekly inspection report shall be retained by the Resource Manager for a minimum of five years or open tax year, whichever is longer.

GM POWERTRAIN GROUP BEDFORD PLANT * INDICATES REVISION REVISER: Tim Galloway	JOB INSTRUCTION NPDES Sampling - Specific to GM Powertrain-Bedford	JOB INSTR. NO. 5580-28 DATE ISSUED 6/24/97 REVISION # 5 REVISION DATE 1/8/01

PURPOSE

Detailed sampling requirements beyond the requirements set forth in NPDES Permit IN0003573.

SCOPE

This instruction applies to all sampling of 002 and 003 outfalls.

RESPONSIBILITY

Laboratory personnel and those persons properly trained (operators), etc.

DOCUMENT CONTROL

Document	Location	Retention Period
Job Instr. 5580-28	Waste Water Treatment Facility	5 years from obsolescence

DEFINITIONS

NPDES - National Pollution Discharge Elimination System

PROCEDURE

1.0 Samples and measurements taken, first and foremost, must meet the requirements set forth in the NPDES Permit IN0003573.

2.0 002 Discharge sampling located in Calgon Building.

*2.1 Composite samples must be started on Sunday, Monday, Tuesday and/or Wednesday to facilitate shipment to contract lab. *Short workweeks can affect the availability of the contract lab to perform analysis 3 times per week.*

*2.1.1 Start samples at 11:00 a.m. *or designated time* by initiating automatic composite sampler by pressing "Resume" (#3) on keypad.

2.1.2 Stop sampler by pressing "Halt" (#2) on keypad.

2.1.3 Transfer sample from composite sample jug to transport jug.

2.1.4 Return composite sample to lab or to refrigerator if there will be a delay before shipment.

2.2 Grab samples should be taken by laboratory personnel or a properly instructed individual.

2.2.1 Sampling spigot is located on discharge side of GAC vessels.

2.2.1.1 Lines should always be flushed for several minutes before grabbing sample.

2.2.1.2 Sampling line should be cleaned periodically because of algae growth and its sloughing off can affect sample results.

*2.3 The 002 outfall should be observed weekly and recorded that such observation was made on Daily Sampling/Shipping form (Form 5580-28(B)). *This observation should include a check for proper operation of the defoamer pump and be included on (Form 5580-28(B)).*

3.0 003 Discharge sampling located at storm lagoon pump station.

3.1 Sampling commences when an overflow alarm alerts operator via computer higher level alarm and/or any additional alarming.

3.1.1 This first sample is the initial sample to contribute to the 24-hour composite.

3.1.2 Additional samples should be taken every four hours while overflow is occurring.

3.1.3 Samples should be labeled with:

3.1.3.1 Exact time

3.1.3.2 Date

3.1.3.3 Height of overflow through the six-foot rectangular weir obtained from staff gauge.

3.1.4 Samples taken every four hours must be brought back to treatment facility and placed in temperature-controlled refrigerator (4° C).

3.2 Grab samples taken for specific test requirements should be taken in addition to the grabs, which will comprise the source of water for the final composite sample.

3.2.1 Use dipper to fill bottles.

3.2.2 Return samples to lab or refrigerator if not shipping immediately.

3.3. Discharge flows must be figured using sample information and the table provided (see Table 6-3B) for six foot rectangular weir, column MGD and column Head in Feet.

3.4 The 003 outfall should be observed weekly and recorded that such observation was made in Operator's Notes of Daily Log (Form 5580-28 (A)).

Approved By:

_____

Wastewater Treatment Manager Date

DATE ISSUED: 01/01/87
REVISION #1
REVISION DATE: 11/11/98
FORM 5580-28(B)

DAILY SAMPLING/SHIPPING SCHEDULE								INHOUSE QC/QA RESULTS		
	MON	TUE	WED	THUR	FRI	SAT	SUN	LAB RESULTS	CERTIFIED VALUE	DATE-
pH										
Conductivity										
002 Observation										
Alkalinity										
Chloride										
Sulfate										
Nitrate										
Nitrite										
Ammonia										
D-Phos										
Total Hardness										
Ca Hardness										
Mg Hardness										
TSS										
TDS										
Copper										
Lead										
Zinc										
Iron										
COD										
Phenol										
TRC										
Fluoride										
FOG										
MBAS										
PCB										
BOD										

Waste Water Treatment - Daily Log

Exhibit B

Powerhouse Data	
Total Softener Process	93600 gal
Meter #1	47800 gal
Meter #2	45800 gal
Process Add	0 gal
City Add	0 gal
Central Res Hardness	120 ppm
Process Hardness	160.00 ppm
City Hardness	200.00 ppm
Chlorine Residual	0.70 ppm
ORP	689.00

Chemical Feed and Usage Data		
Drewgard 120 (Corrosion Inhibitor)	44.00 in	585.2 gal
Drewchlor 4107 (Sodium Chlorite)	36.00 in	478.8 gal
Drew 6110 (Sodium Hypochlorite)	99.00 in	1316.7 gal
Drew 6005 (Hydrochloric Acid 30%)	29.00 in	385.7 gal
Polymer Feed	1.00 Setting	
Alum Level	1470 gal	
Urea Feed 3rd Shift	100 lbs	
Urea Feed 1st Shift	100 lbs	
Urea Feed 2nd Shift	0 lbs	
Alum Feed	20 %	
Urea Feed	0 SPM/(%)	

Basin Levels		
North Surge Basin		3.3 ft
South Surge Basin		-1.6 ft
North Aeration Holding Basin		20.3 ft
South Aeration Holding Basin		6.5 ft
North Holding Basin		-2.1 ft
South Holding Basin		17.3 ft
West Thickener		0 ft
East Thickener		0 ft

Filter Backwash - Time			
1	1610	5	0005
2	1820	6	0515
3		7	0815
4		8	1220

Saltgen Backwash			
Date:		Time:	

Primary Treatment Data		
North Primary		13.0 ft
South Primary		13.0 ft
Sludge Pit Level		7.3 ft
Primary Sludge Pumping N.		NO
Primary Sludge Pumping S.		NO

Aeration Blowers in Use			
1	On	4	On
2	Off	5	Off
3	Off	6	Off

Operation Notes
Shut off # 5 Blower @ 0734 / Urea to 20 SPM @ 0740 / Start 002 @ 1100 TST /
Storm Lagoon Level 11' 3" / Unplug Urea @ 1230 /
7 / 19 / 98 NAB temp 28.1 c

Attachment G

GM Truck Loading/Unloading Job Instruction

Note: This attachment may <u>not</u> contain the most current version of this job instruction! Before using the job instruction verify with the PC&L Master List of Documents that this job instruction is current. If not, obtain a current copy from the PC&L Department or the shared "S" drive (S:\Job Instructions\), which is available on most computers within the facility.

GM POWERTRAIN GROUP BEDFORD PLANT * INDICATES REVISION REVISER: R.Simmerman	**JOB INSTRUCTION** **PC&L** **TANK TRUCK UNLOADING**	J. I. NO.5533-57 DATE ISSUED 7/14/98 REVISION #2 REVISION DATE - 1/18/2000

PURPOSE:

To define the various processes required to insure a "zero defect" delivery.

SCOPE:

This instruction applies to bulk materials received at the Bedford Plant in tank trucks.

RESPONSIBILITIES:

It is the responsibility of applicable personnel when acting as the "receiving agent" and the carrier's driver to abide by the provisions of this instruction.

Document Control:		Document	Location	Retention
		JI 5533-57	PC&L Office	1 year from obsolescence
	*	Receiving Document	Receiving Office/ Chemical Mgmt	2 years
	*	Scale Ticket	Receiving Office / Chemical Mgmt	2 years

INSTRUCTION:

1.0 General

1.1 Unloading of tank trailers will be performed during daylight hours with the following exceptions: Emergency conditions, nitrogen and argon deliveries.

1.2 Driver must check in at main Gatehouse to obtain vehicle pass and weigh-in. Scale ticket must be used to document record of this weigh-in.

1.3 Driver must insure that tank trailer is accurately spotted for unloading at the proper location.

1.4 Tank trucks brakes will be set and the driver must remain with the vehicle during the entire unloading period.

1.5 Tank truck flashers are to be utilized during the entire unloading period to signal personnel in the vicinity that the unloading operation is in progress.

1.6 Unloading operations shall be performed only by reliable persons properly instructed and made responsible for compliance with applicable regulations.

1.7 The following items must be verified by the carrier driver and where appropriate the receiving agent prior to off-loading:

- Tank trailer number must match the trailer number on the shipping papers to determine contents and avoid mixing of products.
- The product name on the shipping papers matches the markings on the storage tank/fill line.

- There is a visible means of measuring the level in the storage tank.
- The storage tank will hold the amount of product being delivered.
- The storage tank is vented.
- If the storage tank is not visible during unloading, the "receiving agent" must be present near the storage tank.
- A connection has been made from the proper tank truck outlet to the proper storage tank.
- Insure that an appropriate catch basin/bucket is available to catch any liquids that may be in the outlet chamber or fill hose during or after unloading is completed.

1.8 Open tank outlet valve and proper valves in the unloading line/storage tank.

1.9 Start pump (or pressurizing tank) checking to insure there is no leakage at any of the connections. Should leakage be present, immediately stop pump (or pressure) and correct conditions as necessary.

1.10 After tank unloading is complete, stop pump (or pressure), close all valves, disconnect plant unloading line from tank truck, replace cap to outlet and make all other closures tight.

1.11 Tank truck flashers may be shut off, and return to Main Security Gatehouse to get weighed out and process paperwork. Scale ticket must be used to document record of outbound weight. Scale ticket record is used to verify quantity of material received and is to be attached to the receiving document.

2.0 Fire Resistant Hydraulic Fluid Delivery

* 2.1 Upon arrival of tank truck, the receiving checker must notify maintenance that a tank truck has been spotted for unloading.

2.2 A receiving inspection will be performed by the machine repair/fluid management personnel.

* 2.3 The results of the receiving inspection will be communicated to the truck driver. If the fluid is OK, the unloading process can begin, if the material is rejected it will be returned to the supplier.

3.0 Flammable Liquid (Gasoline) Delivery

3.1 The unloading of flammable liquid poses additional hazard potential which must be addressed.

3.2 In addition to the general requirements outlined in this instruction, delivery personnel must follow the provisions of the Mullis petroleum, "Procedures and Requirements for Drivers Delivering Gas and Fuel to GM Powertrain Bedford", dated 6/23/98, labeled as Attachment1 to this job instruction.

Approved by:

_____

n., Supervisor., PC & L Date

PUREMAN
BEDFORD PLANT

7333 - FIRE/MEDI-CART
7360 - PLANT PROTECTION

KEY

	TORNADO SHELTER AREA
	TORNADO SHELTER AREA IN BASEMENT
EXIT	EXIT
EXIT	HAZARDOUS STORAGE EVACUATION ROUTE (PRIMARY)
EXIT	GENERAL EVACUATION ROUTE (ALT. HAZ. ROUTE)
	STAIRWAY
	EVACUATION ASSEMBLY AREA

ALARM SIGNAL	ACTION TO BE TAKEN	DEPT./AREA
1 SOUND	EVACUATE	ANNEX BUILDING PISTON BUILDING
2 SOUNDS	EVACUATE	DIE CAST SOUTH DIE CAST WEST
3 SOUNDS	EVACUATE	TOTAL PLANT (EVERYONE)
4 SOUNDS	EVACUATE	DIE CAST NORTH TOOL ROOM
5 SOUNDS	EVACUATE	MAIN BUILDING CHIP & CRUSHER BLDG'S SHEET METAL SHOP
6 SOUNDS	EVACUATE	WASTE WATER TREATMENT
SLOW WAIL	TAKE SHELTER	TOTAL PLANT (EVERYONE)
CONT. NOISE	ALL CLEAR	RETURN TO PLANT/DEPT./AREA

SECURITY

EMERGENCY GUIDELINES

FAMILIARIZE YOURSELF WITH ALL EXIT LOCATIONS.

KNOW WHERE ALL FIRE EMERGENCY AND SAFETY EQUIPMENT IS LOCATED.

FAMILIARIZE YOURSELF WITH COLOR CODED WORK AREA ROUTES AND EXITS.

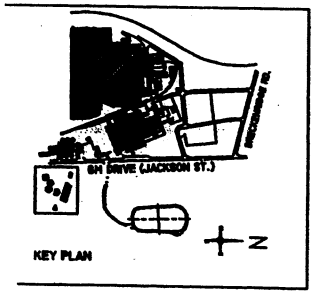
*EVACUATE THE BUILDING WHEN FIRE/EVACUATION SIGNAL SOUNDED AND PROCEED TO NEAREST ASSEMBLY AREA.
OR
PROCEED TO THE TORNADO SHELTER AREA WHEN THE TORNADO/TAKE COVER (SEVERE WEATHER) SIGNAL SOUNDS.

PROCEED TO NEAREST ALTERNATE EVACUATION ROUTE IF PRIMARY ROUTE IS BLOCKED.

REGARDLESS OF THE EVACUATION EXIT USED, EMPLOYEES SHOULD PROCEED TO THEIR ASSIGNED EVACUATION ASSEMBLY AREA. ALTERNATE ASSEMBLY AREAS SHOULD BE USED WHEN PRIMARY AREAS ARE INACCESSIBLE.

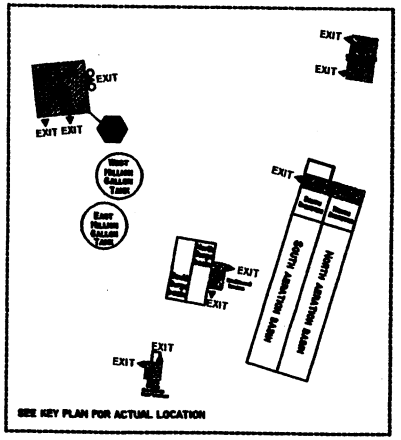
ONCE IN SHELTERS, REMAIN IN AREA UNTIL "ALL CLEAR" IS SOUNDED.

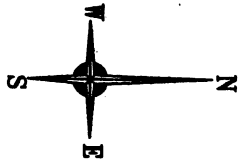
DO NOT REENTER BUILDING UNTIL "ALL CLEAR" SIGNAL HAS BEEN GIVEN.

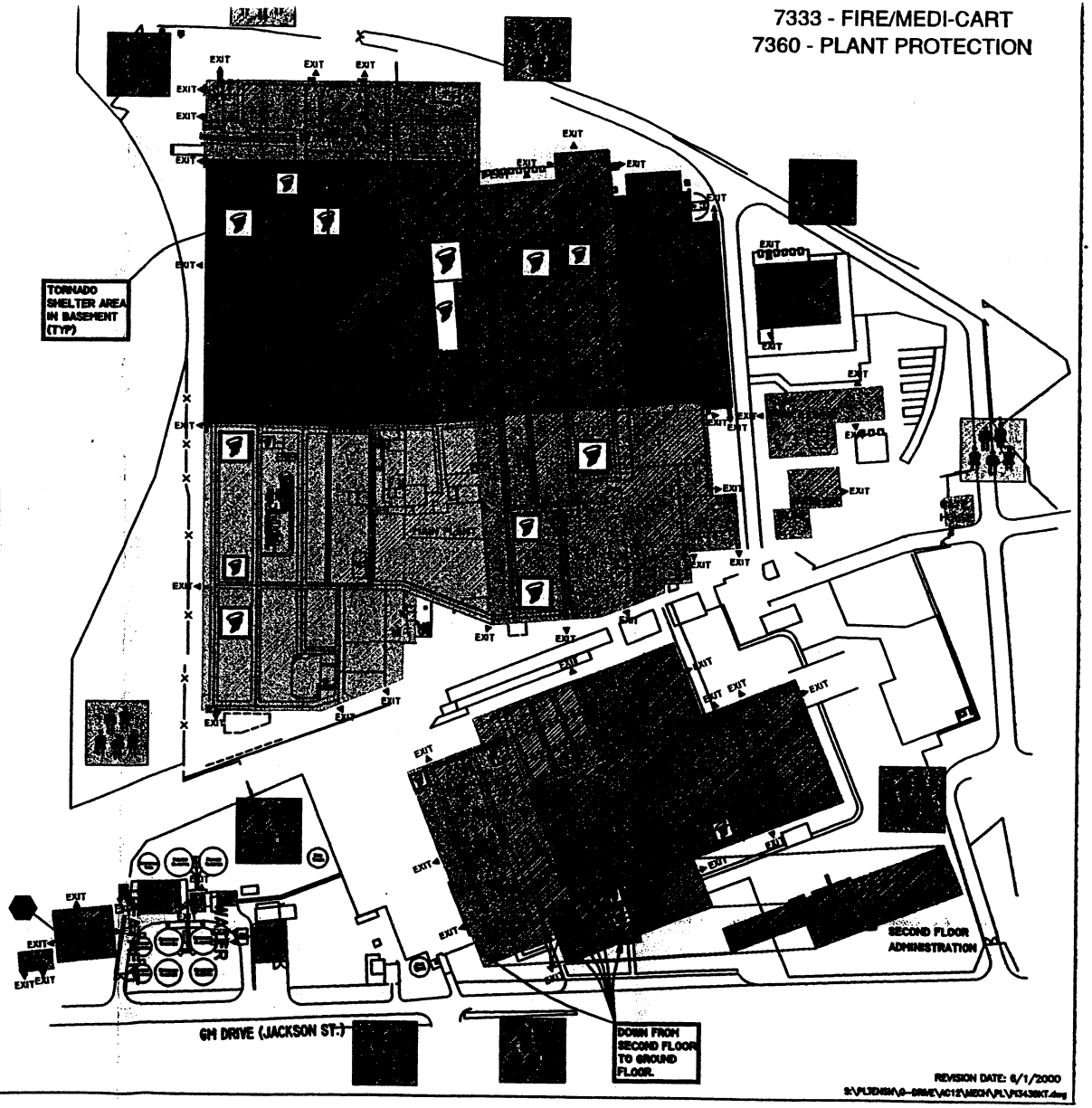


ALL EXIT ROUTES FROM YOUR LOCATION ARE PRIMARY ROUTES. IF YOUR CLOSEST EXIT ROUTE IS BLOCKED, USE THE NEAREST UNOBSTRUCTED ROUTE WHICH WILL BECOME YOUR ALTERNATE ROUTE.

= HAZARDOUS MATERIAL STORAGE.







REVISION DATE: 6/1/2000
S:\PLIEN9N\0-9IME\AC12\MECH\PL\P3438KT.dwg

Attachment I

SPCC Checklist

SPCC CHECKLIST

Yes	No	
☐	☐	Has there been any change (e.g., design, construction/demolition, operation, material type, material volume) that affects your facility's potential to discharge oil or other polluting substance into the waters of the United States during the previous twelve months? *[If yes, plan needs to be amended and recertified.]*
☐	☐	Has there been a change in personnel and/or phone numbers listed on the internal notification list? *[If yes, plan needs to be updated.]*
☐	☐	Have you inspected/inventoried spill response equipment as listed in the Spill Response section of this plan?
☐	☐	Do you have a current contract with an emergency response contractor who can remediate a worst case spill from your facility?
☐	☐	Have you reviewed this plan in detail prior to your signature on this page?
☐	☐	Has your facility experienced a reportable spill within the last twelve months?
☐	☐	If yes, was your spill plan utilized and effective? If you answer no to this question state what changes were made to eliminate the deficiency.
☐	☐	Has your facility had two reportable spill events within a twelve month period or one spill of 1000 gallons or more of oil into navigable waters?
☐	☐	If yes, did you submit your SPCC Plan within 60 days?
☐	☐	Does your plan conform to the content and format of the current version of the GM Standard Environmental Practice for SPCC Plans?

Comments:

Signature _____ Title _____ Date _____

SPCC CHECKLIST

Yes	No	
☐	☒	Has there been any change (e.g., design, construction/demolition, operation, material type, material volume) that affects your facility's potential to discharge oil or other polluting substance into the waters of the United States during the previous twelve months? *[If yes, plan needs to be amended and recertified.]*
☒	☐	Has there been a change in personnel and/or phone numbers listed on the internal notification list? *[If yes, plan needs to be updated.]*
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☒	☐	Have you reviewed this plan in detail prior to your signature on this page?
☐	☒	Has your facility experienced a reportable spill within the last twelve months?
☐	☐	If yes, was your spill plan utilized and effective? If you answer no to this question state what changes were made to eliminate the deficiency.
☐	☒	Has your facility had two reportable spill events within a twelve month period or one spill of 1000 gallons or more of oil into navigable waters?
☐	☐	If yes, did you submit your SPCC Plan within 60 days?
☒	☐	Does your plan conform to the content and format of the current version of the GM Standard Environmental Practice for SPCC Plans?

Comments:

The major change to the plan was the update to the internal and external notification list. There were some minor updates to the emergency response equipment list.

Kimberly Dobzenski	Environmental Engineer	12/27/00
Signature	Title	Date

SPCC CHECKLIST

Yes	No	
☒	☐	Has there been any change (e.g., design, construction/demolition, operation, material type, material volume) that affects your facility's potential to discharge oil or other polluting substance into the waters of the United States during the previous twelve months? *[If yes, plan needs to be amended and recertified.]*
☒	☐	Has there been a change in personnel and/or phone numbers listed on the internal notification list? *[If yes, plan needs to be updated.]*
☒	☐	Have you inspected/inventoried spill response equipment as listed in the Spill Response section of this plan?
☒	☐	Do you have a current contract with an emergency response contractor who can remediate a worst case spill from your facility?
☒	☐	Have you reviewed this plan in detail prior to your signature on this page?
☐	☒	Has your facility experienced a reportable spill within the last twelve months?
☐	☐	If yes, was your spill plan utilized and effective? If you answer no to this question state what changes were made to eliminate the deficiency.
☐	☒	Has your facility had two reportable spill events within a twelve month period or one spill of 1000 gallons or more of oil into navigable waters?
☐	☐	If yes, did you submit your SPCC Plan within 60 days?
☒	☐	Does your plan conform to the content and format of the current version of the GM Standard Environmental Practice for SPCC Plans?

Comments:

The change in the facility that has affected our "potential to discharge oil ... into the waters of the U.S..." was a positive change. Additional containment has been placed around the fuel oil storage tank at the WWT Storm Lagoon decreasing the facility's potential of releasing oil to the environment.

Kimberly Dobrowski	Environmental Engineer	3/7/99
Signature	Title	Date

Attachment J

Spill History

SPILL HISTORY

Spill Events

The following is a summary of the spill events that have occurred at the facility since June 10, 1973:

November 12, 1976 - Black material discharged at 002.

February 22, 1977 - Approximately 5 gallons of used flushing spilled at west side of plant.

November 18, 1977 - A noncompliance with NPDES permit report was filed as a result of excessive suspended solids and grease and oils in 001 and 002 outfalls.

September 21, 1984 - Approximately 2500 gallons spilled from a transport tanker into the plant storm water collection system.

May 24, 1990 - Approximately 20 gallons of 66% sulfuric acid from a 55 gallon plastic drum leaked onto a curbed concrete storage pad.

Description of Incidents:

On November 12, 1976, black material was observed flowing from 002 outfall. This condition lasted approximately one half hour. A test indicated this material contained approximately 160 ppm PCB's. No source of contamination was found. The connection between the settling lagoon and the sewer was removed. By-passed the areas that once contained lagoons.

On February 22, 1977, approximately five gallons of used hydraulic flushing fluid siphoned from its storage tank and reached a storm drain discharging into a ditch west of GM property. The siphoned flow was stopped and the fluid dammed with sand, then cleaned up and disposed of. The ditch was dredged and dredge material disposed of. The storm drain and sewer were abandoned and plugged. The storage tank was moved to a diked area.

On November 18, 1977, a non-compliance with NPDES permit report was filed. Test results at 001 and 002 outfall indicated suspended solids and grease and oils content concentrations that exceeded allowable limits. The reasons for the exceedance were excessive influent flow of water to the treatment plant resulting from a break in underground city water line and a reservoir level control malfunction. Both faults were corrected and effluent water quality returned to allowable quality.

On September 14, 1984, a tank transporter unloading hydraulic fluid to the plant ruptured, releasing approximately 2500 gallons of fluid. The spill plan was activated, containing the majority of the spilled fluid with the remaining fluid entering into the plant's storm water collection system. This fluid was contained at a lift station where the fluid was pumped out

and all lines flushed.

On May 24, 1990, a 55 gallon plastic drum developed a small leak from which approximately 20 gallons of 66% sulfuric acid leaked onto a curbed concrete storage pad. The sulfuric acid ran into a grated perimeter drain trough which runs around the inside of the curbed area and then into a 2' x 2' x 3' pump collection box where the material was contained. Spill Recovery of Indiana was brought in to clean up the spilled acid.

GM POWERTRAIN BEDFORD PLANT * INDICATES REVISION REVISER Kim Dobosenski	EMERGENCY RESPONSE *Internal Spill/Release Report UNCONTROLLED COPY K.D. 1/20/99	FORM NO. 5523-10(A) DATE ISSUED 9/24/98 REVISION # 1 REVISION DATE: 1/19/99

Environmental Audit Report: Privileged Information PAGE 1 OF 1

TO BE COMPLETED BY SECURITY AND/OR ENVIRONMENTAL PERSONNEL

1. Name, Phone Number of Caller: Matt Attutis
   GM Employee? X Yes ____ No If No, Identify ____
2. Date and Time of Call: 1/19/99 at 11:30 a.m.
3. Date and Time of Incident (Estimate): 1/19/99 around 10 - 11a.m.
4. Exact Location of Incident:
   North of the Crusher/Chip System buildings. Outside at the aluminum chip unloading area.
5. Type of Incident Being Reported:
   Spill X Fire ____ Explosion ____ Other ____
6. Discharge to : Interior Bldg. ____ Exterior Containment X
   Sewer System ____ Surface Water ____ Atmospheric Release ____
   Ground ____ Other ____
7. Did the material leave GM Property?: Yes ____ No X Unknown ____
8. Types (or name) of materials involved (if known, be specific): hydraulic fluid
9. Quantities of materials involved (Estimate): 10 - 20 gallons
10. What is the source of the spill?: Oil ~~line~~ hose broke on a truck that was in progress of dumping its load of aluminum chips.
11. Is material continuing to be released?: No
12. What actions, if any, have been taken to contain or clean up materials?: Maintenance was contacted to put oil dry on the spilled material. The oil and oil dry will then be shoveled into a 55-gallon drum for disposal.
13. Any Injuries?: no

ENVIRONMENTAL USE ONLY

14. Did the *Release Plan* and any applicable emergency response procedures appropriately address the Incident?: Yes X No ____ If No, explain deficiency *(use back of form if necessary):*

Explain necessary revisions to the Plan to address future Incidents *(use back of form if necessary):* The spill/release report forms were updated in the Release Plan to ~~meet~~ coincide with the ISO14001 procedure 5523-10 (Emergency Preparedness and Response). Section 4.10 of the Release Plan →

Print Name: Kimberly Dobosenski Time: 9:00 AM

Signature: Kimberly Dobosenski Date: 1/20/99

Note: If this form was initiated by Security Personnel, please submit to the Environmental Department for completion and record retention.

GM POWERTRAIN BEDFORD PLANT * INDICATES REVISION REVISER Kim Dobosenski	EMERGENCY RESPONSE *Internal Spill/Release Report	FORM NO. 5523-10(A) DATE ISSUED 9/24/98 REVISION # 1 REVISION DATE: 1/19/99

Environmental Audit Report: Privileged Information

TO BE COMPLETED BY SECURITY AND/OR ENVIRONMENTAL PERSONNEL

1. Name, Phone Number of Caller: Security
   GM Employee? X Yes ____ No If No, Identify ____
2. Date and Time of Call: 5:35 pm April 12, 1999
3. Date and Time of Incident (Estimate): 5:00 pm
4. Exact Location of Incident:
   Receiving Department - Outside the northeast side of the Receiving office.
5. Type of Incident Being Reported:
   Spill X Fire ____ Explosion ____ Other ____
6. Discharge to : Interior Bldg. X Exterior Containment ____
   Sewer System ____ Surface Water ____ Atmospheric Release ____
   Ground ____ Other ____
7. Did the material leave GM Property?: Yes ____ No X Unknown ____
8. Types (or name) of materials involved (if known, be specific): Gulf Cut Soluble Oil
9. Quantities of materials involved (Estimate): approximately 305 gallons
10. What is the source of the spill?: Nozzel was broken off tote container. Nozzel was up against a wall. When a fork truck driver went to pick the tote up the nozzel caught on the wall and broke off.
11. Is material continuing to be released?: No.
12. What actions, if any, have been taken to contain or clean up materials?:
    The material has been contained. A vac truck will be used to suck up the material and then the material will be sent to WWT to be treated through the WWTP.
13. Any Injuries?: No.

ENVIRONMENTAL USE ONLY

14. Did the *Release Plan* and any applicable emergency response procedures appropriately address the Incident?: Yes X No ____ If No, explain deficiency *(use back of form if necessary):*

Explain necessary revisions to the Plan to address future Incidents *(use back of form if necessary):*
A revision to the Release Plan is not necessary but the PC&L department will be investigating buying new totes that have protected nozzels, nozzels that do not stick out from the tote.

Print Name: Kimberly Dobosenski Time: 5:50 pm

Signature: Kimberly Dobosenski Date: 4/12/99

Note: If this form was initiated by Security Personnel, please submit to the Environmental Department for completion and record retention.

GM POWERTRAIN BEDFORD PLANT * INDICATES REVISION REVISER Kim Dobosenski	EMERGENCY RESPONSE *Internal Spill/Release Report	FORM NO. 5523-10(A) DATE ISSUED 9/24/98 REVISION # 1 REVISION DATE: 1/19/99

Environmental Audit Report: Privileged Information

TO BE COMPLETED BY SECURITY AND/OR ENVIRONMENTAL PERSONNEL

1. Name, Phone Number of Caller: Security
   GM Employee? X Yes ___ No If No, Identify ___
2. Date and Time of Call: 2:30 pm on 3/21/00
3. Date and Time of Incident (Estimate): 2:10 pm on 3/21/00
4. Exact Location of Incident:
   Tool Room Annex Dock
5. Type of Incident Being Reported:
   Spill X Fire ___ Explosion ___ Other ___
6. Discharge to : Interior Bldg. ___ Exterior Containment X
   Sewer System ___ Surface Water ___ Atmospheric Release ___
   Ground X Other Concrete on top of Annex Deck
7. Did the material leave GM Property?: Yes ___ No X Unknown ___
8. Types (or name) of materials involved (if known, be specific): Peerless Spray Kleen 901-1
9. Quantities of materials involved (Estimate): ~ 5 gals.
10. What is the source of the spill?: Spikot on tote of material was leaking - had loosened or was not closed all the way. Material stopped leaking as soon as tote spikot was turned off.
11. Is material continuing to be released?: No.
12. What actions, if any, have been taken to contain or clean up materials?: Material was diluted down sent to WWT drain.
13. Any Injuries?: No

ENVIRONMENTAL USE ONLY

14. Did the *Release Plan* and any applicable emergency response procedures appropriately address the Incident?: Yes X No ___ If No, explain deficiency *(use back of form if necessary):*
    Security notified environmental, environmental notified maintenance of proper cleanup.

Explain necessary revisions to the Plan to address future Incidents *(use back of form if necessary):*

Print Name: Kimberly Dobosenski Time: 3:30 pm

Signature: Kimberly Dobosenski Date: 3/21/00

Note: If this form was initiated by Security Personnel, please submit to the Environmental Department for completion and record retention.

GM POWERTRAIN BEDFORD PLANT * INDICATES REVISION REVISER Kim Dobosenski	EMERGENCY RESPONSE *Internal Spill/Release Report	FORM NO. 5523-10(A) DATE ISSUED 9/24/98 REVISION # 1 REVISION DATE: 1/19/99

*TO BE COMPLETED BY SECURITY AND/OR ENVIRONMENTAL PERSONNEL

1. Name, Phone Number of Caller: R.Z Williams to Security
   GM Employee? X Yes ____ No If No, Identify ____
2. Date and Time of Call: Tuesday, June 20 at approximately 2:00pm
3. Date and Time of Incident (Estimate): Tuesday, June 20, 2000 at approximately 2:00 pm
4. Exact Location of Incident:
   PC+L receiving area → just east of receiving offices.
5. Type of Incident Being Reported:
   Spill X Fire ____ Explosion ____ Other ____
6. Discharge to : Interior Bldg. X Exterior Containment ____
   Sewer System ____ Surface Water ____ Atmospheric Release ____
   Ground ____ Other ____
7. Did the material leave GM Property?: Yes ____ No X Unknown ____
8. Types (or name) of materials involved (if known, be specific): Die Lube 5150
9. Quantities of materials involved (Estimate): Approximately 250 - 300 gallons.
10. What is the source of the spill?: A tote of Die Lube was being lifted down by a fork truck to allow sampling of the material. Due to the slick bottom on the tote and the fact that the forks weren't secured in place the tote fell over popping off the lid.
11. Is material continuing to be released?:
    No.
12. What actions, if any, have been taken to contain or clean up materials?:
    A floor sweeper was brought in, but was unsuccessful in sucking up the material. A sucking truck will be brought in instead. It has the suction necessary for the job.
13. Any Injuries?: No.

*ENVIRONMENTAL USE ONLY

14. Did the *Release Plan* and any applicable emergency response procedures appropriately address the Incident?: Yes X No ____ If No, explain deficiency *(use back of form if necessary):*
    Security was contacted and the appropriate notifications were made.

Explain necessary revisions to the Plan to address future Incidents *(use back of form if necessary):*

Print Name: Kimberly Dobosenski Time: 5:00 pm

Signature: Kimberly Dobosenski Date: 6/20/00

Note: If this form was initiated by Security Personnel, please submit to the Environmental Department for completion and record retention.

Worldwide Facilities Group
Environmental Operations
Midwest Region - Bedford Facility
105 GM Drive
Bedford, Indiana 47421-0271
(812)-279-7404 [fax 7258]
8-343-7404 [fax 7258]

Date: January 15, 2001

To: Environmental Files

From: Kim Dobosenski

Subject: #9 Furnace Spill

On September 28, 2000 there was a loss of aluminum from the #9 furnace in the Main Melting Department. Since this incident was a spill there should have been an Internal Spill/Release Report written to describe and evaluate the situation. Due to the nature of this material (a hot molten metal), one of the primary concerns is fire. As a result of focusing on the fire situation, the fact that this had also been a spill event had been overlooked. Later in evaluating Health and Safety's write-up of the event, it came to my attention that a spill report should have been completed. To help prevent this oversight in the future, aluminum furnaces will be included in the pre-plan binder of potential facility spill events (currently in development). By focusing on the release of molten aluminum in the pre-plan, it should help remind myself and other members of the response team that the release of molten aluminum needs to be considered as a spill event, in addition to the other hazards it presents.

GM POWERTRAIN BEDFORD PLANT * INDICATES REVISION REVISER Kim Dobosenski	EMERGENCY RESPONSE *Internal Spill/Release Report	FORM NO. 5523-10(A) DATE ISSUED 9/24/98 REVISION # 1 REVISION DATE: 1/19/99

Environmental Audit Report: Privileged Information

TO BE COMPLETED BY SECURITY AND/OR ENVIRONMENTAL PERSONNEL

1. Name, Phone Number of Caller: Security, Sue Pridemore, 7360
   GM Employee? X Yes ___ No If No, Identify ___
2. Date and Time of Call: 10-22-00 at 2:30 pm
3. Date and Time of Incident (Estimate): 10-22-00 - time unknown
4. Exact Location of Incident:
   Gas and Diesel fueling area. As part of our effort to put containment around the current gas + diesel tanks, temporary fueling tanks were brought in - the temporary diesel tank had the release of fluid
5. Type of Incident Being Reported:
   Spill X Fire ___ Explosion ___ Other ___
6. Discharge to : Interior Bldg. ___ Exterior Containment ___
   Sewer System ___ Surface Water ___ Atmospheric Release ___
   Ground X Other ___
7. Did the material leave GM Property?: Yes ___ No X Unknown ___
8. Types (or name) of materials involved (if known, be specific): Unocal Diesel #1
9. Quantities of materials involved (Estimate): 150 - 200 gallons
10. What is the source of the spill?: A temporary diesel fuel tank had been damaged either by support stand collapsing or from being hit.
11. Is material continuing to be released?: No, doesn't appear to be.
12. What actions, if any, have been taken to contain or clean up materials?:
    Material is naturally being contained on top of the clay soil. No internal actions have been taken to further contain material - called
13. Any Injuries?: No. Barrier has been established to keep people out - no smoking signs posted.

Spill Rep of Find for externa respons

***ENVIRONMENTAL USE ONLY**

14. Did the *Release Plan* and any applicable emergency response procedures appropriately address the Incident?: Yes X No ___ If No, explain deficiency *(use back of form if necessary):*
    However, as a recommendation for improvement, it was suggested that the insurance papers for our spill responders be kept in our spill plan.
    Explain necessary revisions to the Plan to address future Incidents *(use back of form if necessary):*
    None observed.

Print Name: Kimberly Dobosenski Time: 4:00 pm

Signature: Kimberly Dobosenski Date: 10/22/00

Note: If this form was initiated by Security Personnel, please submit to the Environmental Department for completion and record retention.

SPILL RECOVERY OF INDIANA, INC.

RESPONSE REPORT

Customer Name/ Address:	General Motors Powertrain 105 GM Drive Bedford, IN 47421	
Response Requested By: Name/ Company/ Date/ Time:	Kimberly Dodosenki 10/22/00	GM Powertrain 3:15 p.m.
Date/Time Spill Occurred:	10/22/00	exact time unknown to SROI
Cause of Spill:	Overturned AST	
Spill Location: Address/ City/ Zip Code:	General Motors Powertrain Bedford, IN	
Area Affected:	1400 sq. ft.	
Product Name/ Description:	Diesel Fuel	
Amount Spilled: Est. 200-gallon	Amount Recovered: 163-gallon	

Containment/ Clean-up: The SROI Project Manager received a call from Kimberly Dodosenki with GM Powertrain in Bedford requesting response to a diesel fuel spill at the Bedford location. It was agreed upon between the SROI Project Manager and Kimberly Dodosenki that SROI would only remove the free liquid. SROI responded to the scene with a vacuum truck and stake truck, Project Manager, Equipment Operator, and Spill Technician. U box #s with the vacuum truck. All free liquid on the ground was vacuumed dry. The SROI Crew applied a thin layer of peat dual product that may leach out of the soil. 410931 and

Ms. Kimberly Dodosenki 410791 M Powertrain personnel would complete the rest of the cl were the soil removed from this area.

MSDS: {X} On File

Disposal of Recovered Material:

On Scene Representatives:
Spill Recovery of Indiana:

Site Map Attached: _____Yes

Re: 109395

Use Ball Point Pen • Pressing Hard • Making 7 Copies

SK Services, L.C. A Safety-Kleen Company

Shipping Bill of Lading

1. Generator's US EPA ID No. (If any): IND006036099

2. Gen. BOL No.: 42293

3. Generator's Name and Mailing Address

General Motors Powertrain Div.
105 GM Drive
Bedford, IN 47421

Generator's Phone (812) 279-7144

4. Transporter 1 Company Name: Canadian Pacific — MND006962641 — (800)-766-4397

5. Transporter 2 Company Name: UPRR — NED001792910 — (402)-271-4400

6. Transporter 3 Company Name

7. Transporter 4 Company Name

8. Designated Facility Name and Site Address

ECDC Environmental
1111 W. Highway 123, P.O. Box 69, East Carbon, Utah 84520, Phone (801) 888-4451

	9. U.S. DOT Description (including Proper Shipping Name) HM	10. Containers No.	Type	11. Total Quantity	12. Unit Wt/Vol	13. Waste Profile Sheet #
a.	Non-Hazardous, Non-Regulated Material per 49 CFR & 40 CFR (Concrete/Soil)	001	CM	30440	Lbs ~~Yd~~	
b.						

14. Additional Descriptions for Materials Listed Above

Profile# GM21450-1000

Container# 410791

15. Special Handling Instructions and Additional Information

Emergency Phone# 1-800-535-5053

ERG# 171

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Printed/Typed Name: on behalf of GMPT ~~Daniel Eolz~~ Edward L. Rainer — Signature: Edward L. Rainer — Month 12 Day 00 Year 00

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

19. Transporter 3 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

20. Transporter 4 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

21. Discrepancy Indication Space

22. Facility Owner or Operator: Certification of Receipt of non-hazardous materials covered by this Bill of Lading except as noted in item 21.

Printed/Typed Name — Signature — Month Day Year

GENERATOR

TRANSPORTER

FACILITY

FORM #751-7501

Use Ball Point Pen • Pressing Hard • Making 7 Copies

SK Services, L.C. A Safety-Kleen Company

Shipping Bill of Lading

1. Generator's US EPA ID No. (If any): IND006036099

2. Gen. BOL No.: 42294

3. Generator's Name and Mailing Address: General Motors Powertrain Div.
105 GM Drive
Bedford, IN 47421

Generator's Phone (812) 279-7144

4. Transporter 1 Company Name: Canadian Pacific — MND006962641 — (800)-766-4397

5. Transporter 2 Company Name: UPRR — NED001792910 — (402)-271-4400

6. Transporter 3 Company Name:

7. Transporter 4 Company Name:

8. Designated Facility Name and Site Address:
ECDC Environmental
1111 W. Highway 123, P.O. Box 69, East Carbon, Utah 84520, Phone (801) 888-4451

9. U.S. DOT Description (including Proper Shipping Name)	HM	10. Containers No.	Type	11. Total Quantity	12. Unit Wt/Vol	13. Waste Profile Sheet #
a. Non-Hazardous, Non-Regulated Material per 49 CFR & 40 CFR (Concrete/Soil)		001	CM	30800	~~Yd~~ Lbs.	
b.						

14. Additional Descriptions for Materials Listed Above
Profile# GM21450-1000
Container# 410931

15. Special Handling Instructions and Additional Information
Emergency Phone# 1-800-535-5053
ERG# 171

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

on behalf of GMPT
Daniel Folz

Printed/Typed Name: Edward L. Raines — Signature: Edward L Raines — Month 12 Day 06 Year 00

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Transporter 3 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

20. Transporter 4 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

21. Discrepancy Indication Space

22. Facility Owner or Operator: Certification of Receipt of non-hazardous materials covered by this Bill of Lading except as noted in item 21.
Printed/Typed Name — Signature — Month Day Year

GENERATOR — TRANSPORTER — FACILITY

FORM #751-7501

• First Copy: Return to Generator • Third Copy: Transporter #2 • Fifth Copy: Transporter #4 • Seventh Copy: Facility Copy

SPILL RECOVERY OF INDIANA, INC.

CERTIFICATION OF FUEL BLENDING

TO: GENERAL MOTORS POWERTRAIN
105 GM DRIVE
BEDFORD, IN 47421

PRODUCT: DIESEL

GALLONS: 163

THE MATERIAL AND GALLONS AS INDICATED ABOVE, WAS ENTERED INTO A FUEL BLENDING PROGRAM. THE FUELS ARE OFFERED FOR THIS PROGRAM TO **WARRIOR OIL SERVICES, INC.**, IN ACCORDANCE WITH UNITED STATES ENVIORNMENTAL PROTECTION AGENCY, FOR FUEL BLENDING PROGRAMS.

LOCATION: SAME

INVOICE NUMBER: 109395

Regina D. Congrove

Regina D. Congrove
Client Services

SPILL RECOVERY OF INDIANA, INC. EPA ID# IND981956055
WARRIOR OIL SERVICE, INC. EPA ID# IND984900308

SROI 109395

SPILL RECOVERY OF INDIANA
SR OI
24 HR. SERVICE
EMERGENCY 317-291-3972

P.O. Box 34337
Indianapolis, IN 46234
1-800-421-SROI (7764)

Spill Control Association of America

CUSTOMER
P.O. # _____

Date 10/2 TEL # _____
Customer _____ Contact _____
Billing Address _____
Location of Work _____
Job Description _____

PPE Level

EQUIPMENT

QTY.	HOURS	DESCRIPTION	
		Vacuum Truck	#
		Vacuum Truck	#
		Vacuum Truck	#
		Tanker	#
		Stake Truck	#
		Support Vehicle	#
		Support Vehicle	#
		Front Loader	#
		Dump Truck	#
		Backhoe	#
		Track Hoe	
		Swap Loader	

EQUIPMENT

QTY.	HOURS	DESCRIPTION
		EMER. RESPONSE UNIT #
		Hand Tools
		Sampling Equipment
		PPE

MATERIALS

QTY.	DESCRIPTION		
	Pads	bale	each
	5" Boom	bale	each
	8" Boom	bale	each
	Pillows	bale	each
	Sweep	bale	
		Sample Tags	

MATERIALS

QTY.	DESCRIPTION			
	Kiln Dust			
	Spahg Sorb	size:	C.F.	
	Floor Dri			
	Drum	17-H	17-E	Poly Steel
	Drum, O-Pak	gal	Poly	Steel
	Drum Labels			

Man Hours

QTY.	DESCRIPTION	INT.
	Project Mgr/Foreman	
	Equipment Operator	
	Equipment Operator	
	Equipment Operator	
	Technician	
	Technician	
	Technician	
	Technical Service	

Man Hours

QTY.	DESCRIPTION	INT.
	Delivery	
	Fuel Blending	
	Water Treatment	

Rep. for Customer _____ Title: _____ SROI Rep. _____ Date 10/2 2

NOTE: The above Work Order does not include certain incurred costs for materials or services supplied in the performance of the contract. The liability for which Spill Recovery Of Indiana has not yet received notification. Such incurred liabilities shall be included in a final invoice for services rendered in the performance of the contract. For example, but not limited to: fuel, telephone, miscellaneous tools, gloves, mileage, etc.

SPILL RECOVERY & CLEANUP CONTRACT

Comes now SPILL RECOVERY OF INDIANA, INC., hereinafter referred to as the "Contractor", and

Comes now _____

hereinafter referred to as the "Customer", by and through its duly authorized representative, agent, servant and/or employee, and

IT IS COVENANTED AND AGREED AS FOLLOWS:

1. The Customer hires the Contractor for the purpose of the recovery/clean-up of the materials of which said spill occured on or about 10-22-~~98~~ 2000 and involves an area in the location of GM Powertrain

2. The Contractor agrees to undertake the spill recovery work and to satisfy the requirements of the various governmental authorities which are made known by the Customer to the Contractor, providing all necessary materials, labor and equipment as per a schedule of charges, which is attached hereto, made a part thereof, and marked Exhibit "A" for identification.

3. The Customer authorizes the Contractor to use whatever equipment the Contractor deems necessary and provide whatever labor the Contractor deems necessary to complete the spill recovery/ clean-up as herein provided, and Customer agrees to pay the charges for said material, labor and equipment as set forth in Exhibit "A" attached hereto.

4. Payment shall be made by the Customer to the Contractor promptly upon submission of invoices, and will be from time to time submitted during the course of the work by the Contractor to the Customer. If any invoice is not paid within thirty (30) days from its due date, Contractor may take any action at law or equity for recovery and Customer agrees to pay all costs, including reasonable attorney fees incurred by Contractor in bringing such action.

5. The Customer shall designate the area in which the spill recovery/clean-up is to be conducted in writing and attach hereto as Exhibit "B", and the Customer will hold the Contractor harmless from any and all claims arising out of necessary ingress and egress and operation on lands necessitated by the recovery or clean-up, but the Contractor shall be responsible for any damages to lands or buildings thereon caused by the negligence of the Contractor, his servants, agents and/or employees, and shall hold the Customer harmless from claims arising out of that said negligence.

6. The Contractor will carry suitable liability insurance covering its operation, a copy is attached and marked Exhibit "C". The Contractor shall carry the necessary Workmen's Compensation Insurance and upon demand, deliver a certificate for said insurance to the Customer.

7. The Customer shall agree to furnish a Certificate of Insurance covering liability to SPILL RECOVERY OF INDIANA, INC.

8. The Customer may stop the spill recovery/clean-up work upon twenty-four (24) hour written notice, and upon payment of all invoices submitted or due at the time of the work stoppage.

9. Any estimates of time, labor, material and equipment given by the Contractor to the Customer are estimates only, since the work on the spill recovery/ clean-up must be done in such a manner as to comply with the rules and regulations of various governmental authorities and the controlling price for work done shall not be the estimate but the actual amount of time, labor and equipment spent in accordance with Exhibit "A" atached hereto and invoices submitted thereon by the Contractor to the Customer.

DATED THIS day of 10-22-00

SPILL RECOVERY OF INDIANA, INC.

By _____

Title _____

Customer General Motors Powertrain-Bedford

By _____

Title Environmental Engineer

Attachment K

Communications with Local Response / Emergency Facilities

Worldwide Facilities Group
Environmental Services
Midwest Region - Bedford Facility
105 GM Drive
Bedford, Indiana 47421-0271
(812)-279-7404 [fax 7258]

November 24, 1998

Dunn Memorial Hospital
1600 23rd Street
Bedford, IN 47421

Subject: Emergency Response and Preparedness - Release Plan

Dear Jon Maze, Ambulance Supervisor

Thank you for your interest in the GM Powertrain - Bedford, Emergency Response and Preparedness - *Release Plan*. The plan gives important background information about chemicals stored at our facility and the steps that would be taken in the event of a significant chemical release. As you will find in the plan, the Bedford Fire Department is the only local emergency response group that has direct responsibility for responding to significant chemical releases. The Bedford Fire Department has been trained in spill response under the HAZWOPER program and has the necessary skills to protect local health and the environment.

The Dunn Memorial Hospital would **NOT** be asked to respond directly to chemical releases at the facility. However, in the event of an emergency the Dunn Memorial Hospital may be utilized, if necessary, to give medical attention to people in the plant and the surrounding region.

If you have any questions with any of the information contained in the plan, please feel free to call me at 279-7404.

Sincerely,

Kimberly Dobosenski

Kimberly Dobosenski
Environmental Engineer

GM

Worldwide Facilities Group
Environmental Services
Midwest Region - Bedford Facility
105 GM Drive
Bedford, Indiana 47421-0271
(812)-279-7404 [fax 7258]

November 24, 1998

Laurence County Local Emergency Planning Committee
Rt 10 Box # 1122
Bedford, IN 47421

Subject: Emergency Response and Preparedness - Release Plan

Dear Valerie Luchauer,

Thank you for your interest in the GM Powertrain - Bedford, Emergency Response and Preparedness - *Release Plan.* The plan gives important background information about chemicals stored at our facility and the steps that would be taken in the event of a significant chemical release. As you will find in the plan, the Bedford Fire Department is the only local emergency response group that has direct responsibility for responding to significant chemical releases. The Bedford Fire Department has been trained in spill response under the HAZWOPER program and has the necessary skills to protect local health and the environment.

If you have any questions with any of the information contained in the plan, please feel free to call me at 279-7404.

Sincerely,

Kimberly Dobosenski

Kimberly Dobosenski
Environmental Engineer

Worldwide Facilities Group
Environmental Services
Midwest Region - Bedford Facility
105 GM Drive
Bedford, Indiana 47421-0271
(812)-279-7404 [fax 7258]

November 24, 1998

Bedford Regional Medical Center
2900 West 16th Street
Bedford, IN 47421

Subject: Emergency Response and Preparedness - Release Plan

Dear Jim Pittman,

Thank you for your interest in the GM Powertrain - Bedford, Emergency Response and Preparedness - *Release Plan.* The plan gives important background information about chemicals stored at our facility and the steps that would be taken in the event of a significant chemical release. As you will find in the plan, the Bedford Fire Department is the only local emergency response group that has direct responsibility for responding to significant chemical releases. The Bedford Fire Department has been trained in spill response under the HAZWOPER program and has the necessary skills to protect local health and the environment.

The Bedford Regional Medical Center would **NOT** be asked to respond directly to chemical releases at the facility. However, in the event of an emergency the Bedford Regional Medical Center may be utilized, if necessary, to give medical attention to people in the plant and the surrounding region..

If you have any questions with any of the information contained in the plan, please feel free to call me at 279-7404.

Sincerely,

Kimberly Dobosenski

Kimberly Dobosenski
Environmental Engineer

Worldwide Facilities Group
Environmental Services
Midwest Region - Bedford Facility
105 GM Drive
Bedford, Indiana 47421-0271
(812)-279-7404 [fax 7258]

November 24, 1998

Bedford Police
1617 K. Street
Bedford, IN 47421

Subject: Emergency Response and Preparedness - Release Plan

Dear Dave Jarrard,

Thank you for your interest in the GM Powertrain - Bedford, Emergency Response and Preparedness - *Release Plan*. The plan gives important background information about chemicals stored at our facility and the steps that would be taken in the event of a significant chemical release. As you will find in the plan, the Bedford Fire Department is the only local emergency response group that has direct responsibility for responding to significant chemical releases. The Bedford Fire Department has been trained in spill response under the HAZWOPER program and has the necessary skills to protect local health and the environment.

The Bedford Police would **NOT** be asked to respond directly to chemical releases at the facility. However, in the event of an emergency the Bedford Police may be utilized, if necessary, to give assistance to the emergency situation.

If you have any questions with any of the information contained in the plan, please feel free to call me at 279-7404.

Sincerely,

Kimberly Dobosenski

Kimberly Dobosenski
Environmental Engineer

Worldwide Facilities Group
Environmental Operations
Indiana Region - Bedford Facility
P.O. Box, 271, 105 GM Drive
Bedford, Indiana 47421-0271
(812)-279-7308 [fax 7258]
8-343-7308 [fax 7258]

In order to meet our requirements under the ISO14000 program, we are issuing the following statement. This statement verifies that General Motors Environmental Personnel, from the Bedford facility, have discussed and made arrangements with the local Fire Department in regards to GM Bedford's Emergency Response and Preparedness - *Release Plan.* In the event of an actual or imminent emergency, beyond the capabilities of internal response, the Bedford Fire Department will be called to respond.

I certify that I have reviewed and discussed the GM Bedford Emergency Response and Preparedness - *Release Plan* with the Bedford Fire Chief.

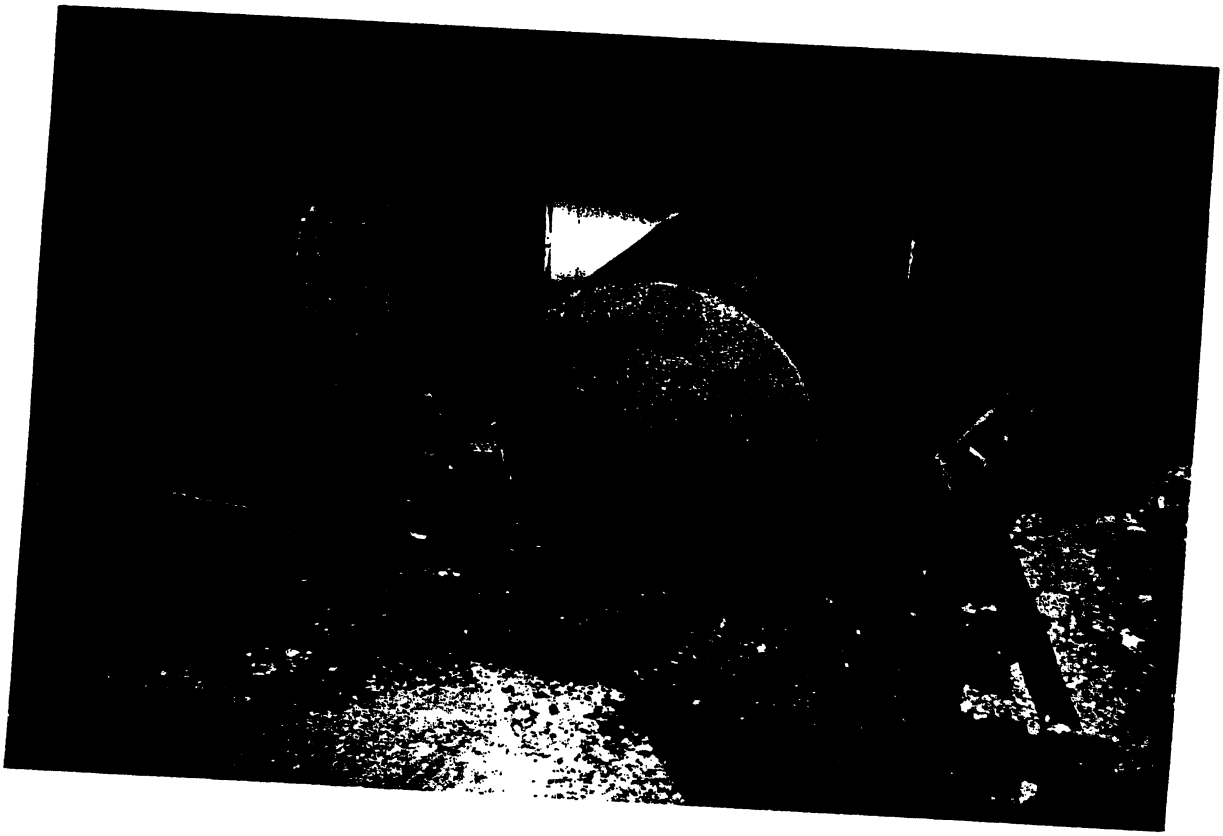
Wm. Schrom — GM Environmental Engineer

11-30-98 — Date

I certify that the GM Bedford Emergency Response and Preparedness - *Release Plan* has been reviewed and discussed with me by GM Environmental Personnel.

Carl Braunkamp — Bedford Fire Chief

11-30-98 — Date



SPILL RECOVERY OF INDIANA
SR OI
24 HR. SERVICE
EMERGENCY 317-291-3972

SAM ADAMS
PROJECT MANAGER

P.O. BOX 34337
INDIANAPOLIS, IN 46234
1-800-421-7764

UM is an acknowledgement that a bill of lading has been issued and is not the Original Bill of Lading, not a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper's No. [illegible]

covery of Indiana, Inc. SCAC. _____ Carrier's No. IND981956055

ns and tariffs in effect on the date of this Bill of Lading:

[illegible], date [illegible] from [illegible]

good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this ation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own road or its own water line, otherwise to deliver to another carrier on the route to said h carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be by law, whether printed or written, herein contained (as specified in Appendix B to Part 1035) which are hereby agreed to by the shipper and accepted for himself and his assigns.

of consignee for purposes of notification only.)
covery of Indiana
US Hwy 136
olis, IN Zip 46234

FROM: [illegible]
Shipper
Street
Origin Zip

Trailer Initial/ Number 57

U.S. DOT Hazmat Reg. Number

n of articles, special marks, and exceptions	Hazard Class	I.D. Number	Packing Group	*Weight (subject to correction)	Class or rate	Labels required (or exemption)	Check column
[illegible]				137	G		
[illegible]				26	G		
		Total		163	G		

State: Zip:

y water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight". se required to state specifically in writing the agreed or declared value of the property.

per _____

ls are properly classified, described, packaged, marked and tion according to the applicable regulations of the Department

COD AMT: $

Charges Advanced $ _____

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor)

C. O. D. FEE:
Prepaid ☐
Collect ☐ $

FREIGHT CHARGES
☐ Prepaid ☐ Collect

PLACARDS REQUIRED

PLACARDS SUPPLIED ☐ YES ☐ NO - FURNISHED BY CARRIER

DRIVER'S SIGNATURE:

[illegible] DATE: [illegible]

CARRIER: SROI, Inc.

PER: [illegible] DATE: [illegible]

EMERGENCY RESPONSE TELEPHONE NUMBER: (800) 421-7764

Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (§172.60

er

9-BLS-A3 (Rev. 7/9

receive a copy of the GM Powertrain - **Emergency Response and Prepared** ***Release Plan.***

Please address the package to the atten of Valerie Luchauer
(Name of Individual to receive the Release Plan)

at the following address:
R+10 Box #1122
Bedford, IN 47421

☒ Yes, BEDFORD POLICE wou
(Name of Emergency Service)
receive a copy of the GM Powertrain - **Emergency Response and Prepared** ***Release Plan.***

Please address the package to the atten of DAVE JARRARD
(Name of Individual to receive the Release Plan)

at the following address:
1617 K STREET
BEDFORD, IN 47421

☒ Yes, Bedford Regional Medical Center wou
(Name of Emergency Service)
receive a copy of the GM Powertrain - **Emergency Response and Prepared** ***Release Plan.***

Please address the package to the atten of Jim Pittman
(Name of Individual to receive the Release Plan)

at the following address:
2900 W. 16th St.
Bedford, IN. 47421

☑ Yes, Dunn Memorial Hospital woul
(Name of Emergency Service)
receive a copy of the GM Powertrain - **Emergency Response and Preparedne** ***Release Plan.***

Please address the package to the attenti of Joo Maze Ambulance Supe
(Name of Individual to receive the Release Plan)

at the following address:
1600-23RD ST.
Bedford, IN 47421

R:
items 1 and/or 2 for additional services.
ms 3, 4a, and 4b.
me and address on the reverse of this form so that we can return this
form to the front of the mailpiece, or on the back if space does not
turn Receipt Requested" on the mailpiece below the article number.
n Receipt will show to whom the article was delivered and the date

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery
Consult postmaster for fee.

Addressed to: Doug
- ath: Webster, Chair
.. 10
Box 1122
ford, IN 47421

4a. Article Number
Z 516 937 [redacted] 681

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
Nov 2, 1998

ed By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

re: (Addressee or Agent)
Valerie Luchauer

3811, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery
Consult postmaster for fee.

3. Article Addressed to:
Bedford Police Department
Attn: Assistant Chief Dave Jarrard
1617 K St.
Bedford, IN 47421

4a. Article Number
Z 516 937 682

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
10/31/98

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)
X Kathy Hodges

PS Form 3811, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery
Consult postmaster for fee.

3. Article Addressed to:
Bedford Regional Medical Center
Attn: James Pittman
2900 W 16 th St.
Bedford, IN 47421

4a. Article Number
Z 516 937 680

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
11-2-98

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)
X [illegible]

PS Form 3811, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

1. ☐ Addressee's Address
2. ☐ Restricted Delivery
Consult postmaster for fee.

3. Article Addressed to:
Dunn Memorial Hospital
Attn: Marianne Pemberton
1600 23rd St.
Bedford, IN 47421

4a. Article Number
Z 516 937 683

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
10-31-98

5. Received By: (Print Name)

8. Addressee's Address (Only if requested

Worldwide Facilities Group
Environmental Services

GM Powertrain 105 Dr.
Bedford, Indiana 47421
Phone: 812-279-7404
Fax: 812-279-7258

Date: October 27, 1998

To: **Lawrence County Local Emergency Planning Committee**

From: **Kimberly Dobosenski, General Motors Environmental Engineer**

Subject: **New Version of the GM Powertrain - Bedford, Emergency Response and Preparedness Release Plan**

The Emergency Response and Preparedness - Release Plan for the GM Powertrain - Bedford Aluminum Foundry has been updated and amended from the 1997 version. If you would like to have a copy of this Release Plan, please complete and return the following postcard.

Thank you for your support and services

Worldwide Facilities Group
Environmental Services

GM Powertrain 105 Dr.
Bedford, Indiana 47421
Phone: 812-279-7404
Fax: 812-279-7258

Date: October 27, 1998

To: **Bedford Police Department**

From: **Kimberly Dobosenski, General Motors Environmental Engineer**

Subject: **New Version of the GM Powertrain - Bedford, Emergency Response and Preparedness Release Plan**

The Emergency Response and Preparedness - Release Plan for the GM Powertrain - Bedford Aluminum Foundry has been updated and amended from the 1997 version. If you would like to have a copy of this Release Plan, please complete and return the following postcard.

Thank you for your support and services

Worldwide Facilities Group
Environmental Services

GM Powertrain 105 Dr.
Bedford, Indiana 47421
Phone: 812-279-7404
Fax: 812-279-7258

Date: October 27, 1998

To: **Bedford Regional Medical Center**

From: **Kimberly Dobosenski, General Motors Environmental Engineer**

Subject: **New Version of the GM Powertrain - Bedford, Emergency Response and Preparedness Release Plan**

The Emergency Response and Preparedness - Release Plan for the GM Powertrain - Bedford Aluminum Foundry has been updated and amended from the 1997 version. If you would like to have a copy of this Release Plan, please complete and return the following postcard.

Thank you for your support and services

Worldwide Facilities Group
Environmental Services

GM Powertrain 105 Dr.
Bedford, Indiana 47421
Phone: 812-279-7404
Fax: 812-279-7258

Date: October 27, 1998

To: **Dunn Memorial Hospital**

From: **Kimberly Dobosenski, General Motors Environmental Engineer**

Subject: **New Version of the GM Powertrain - Bedford, Emergency Response and Preparedness Release Plan**

The Emergency Response and Preparedness - Release Plan for the GM Powertrain - Bedford Aluminum Foundry has been updated and amended from the 1997 version. If you would like to have a copy of this Release Plan, please complete and return the following postcard.

Thank you for your support and services

KOESTER™
ENVIRONMENTAL SERVICES, INC.
"Employee Owned"

14649 Highway 41 North • Evansville, IN 47711
(812) 867-0100 • Fax (812) 867-4478
www.koesterco.com
1-888-KOESTER

SPECIFIC SERVICES AGREEMENT
(EMERGENCY RESPONSE SERVICE)
KES Job Number S0199

This Agreement entered into by and between **GM Powertrain Group, GM Corporation (Bedford Plant)**, with its mailing address at **105 GM Drive, Bedford, IN 47421, Phone: 812-279-7308 Fax: 812-279-7258** (hereinafter referred to as "Client"), and Koester Environmental Services, Inc. (hereinafter referred to as "KES");

1. **Details of Emergency.** (Identify known facts and conditions that requires emergency response action.)

   Annual Specific Service Agreement to provide labor, equipment and materials necessary to perform emergency spill response and clean-up for hazardous materials accidentally released into the environment by representatives or property of GM Powertrain Group, GM Corporation (hereinafter referred to as the "Emergency").

2. **Location:**

   Bedford Plant located at 105 GM Drive in Bedford, Indiana

3. **Services.** KES shall furnish labor, material and equipment for the Services necessary to respond to the Emergency in accordance with local, state, and federal regulations. KES shall attempt to stabilize, control or contain the Emergency within a reasonable time to prevent contamination and danger to the public and/or the environment. Actions taken by KES shall be based on the facts and information regarding the Emergency as set forth in paragraph 1 (hereinafter referred to as the "Services"). Client shall promptly inform KES in the event additional information concerning the Emergency becomes available.

4. **Price and Billing.** KES shall furnish labor, material and equipment for the Services necessary to respond to the Emergency in accordance with local, state, and federal regulations in association with the Equipment/Price List attached (see attachment A).

5. **Unknown Conditions.** Client understands and agrees that the exact Services needed to remedy the Emergency cannot be foreseen. The exact Services to be rendered will be determined by KES in consultation with participating parties pursuant to the circumstances of each situation and are hereby authorized by Client; provided, however, that if time allows, any extreme conditions not set forth in paragraph 1 of this Agreement shall be discussed with Client to determine such action to be taken.

6. **Inability to Respond.** Client understands that while KES will attempt to respond to the circumstances that may arise, KES does not guarantee that it will be able to respond to all situations.

7. **Certifications.** KES shall maintain its certification by applicable local, state and federal statutes and regulations to perform this class of environmental services.

8. **Notices.** All applicable notices of the Emergency and Services to governmental agencies or authorities are solely the responsibility of the Client unless the Client direct KES to notify appropriate entities.

9. **Authority.** Each individual executing this Agreement on behalf of the parties hereto represents and warrants that they are duly authorized to execute and deliver this Agreement on behalf of their respective companies or entities.

10. **Miscellaneous.** Client agrees and acknowledges that it shall submit all sums owed to KES under this agreement within 30 days of the date of the invoice. Client agrees to pay a 1.5% carrying charge per month on all amounts not paid within 30 days from the date of invoice. Client shall pay any and all costs and attorneys' fees that KES incurs in pursuing any collection of fees owed under this agreement.

11. **Effective Date.** This Agreement is effective immediately for one (1) year upon the execution of contract.

WITNESSETH THAT:

For and in consideration of the mutual promises, covenants, and agreements herein contained and agreed to be kept and performed by the parties hereby, the parties hereto do hereby mutually agree and understand the Agreement. The contract documents consist of this Agreement and the General Contract Conditions. This Agreement and the General Contract Conditions form the complete agreement of the parties. The General Contract Conditions is incorporated into this Agreement and is a part of this Agreement as if attached to this Agreement and repeated herein in its entirety. This Agreement and the General Contract Conditions represent the entire and integrated agreement between the parties hereto and supersede prior negotiations, representations or agreements, either written or oral.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands.

KOESTER ENVIRONMENTAL SERVICES, INC.

Dated: January 20, 2000

By: _____
Jan Schuler
Business Unit Manager, Industrial Services

By: _____
Michael E. Thompson
President

Client

Dated: Jan. 20, 2000

By: Wm. Schoenmaker
Signature

Wm. Schoenmaker
Printed Name

Environmental Regional Mgr.
Title

ATTACHMENT A

KOESTER ENVIRONMENTAL SERVICES, INC.
Time & Materials Rates

Revised / Effective March 29, 1998

Technical and Professional Staff:	
Principal	150.00/Hr.
Vice President	100.00/Hr.
Sr. Manager	90.00/Hr.
Geologist	65.00/Hr.
Project Manager	65.00/Hr.
Environmental Scientist	55.00/Hr.
Engineer	60.00/Hr.
Supervisor/Operator	50.00/Hr.
Leadman	42.00/Hr.
Field Technician	30.00/Hr.
Shop Personnel	35.00/Hr.
Industrial Hygienist	60.00/Hr.
Waste Mgmt Personnel	50.00/Hr. Ea.
Administrative Support	35.00/Hr.
Drafter/Illustrator	30.00/Hr.
Analyst	45.00/Hr.
Estimators	46.00/Hr.
Photographs	Cost + 15%
Copies	0.15/Ea.
Per Diem	25.00/Man/Day
Accommodations (Hotel, etc.)	Cost + 15%
Construction Equipment:	
Concrete Saw	$ 78.00/Day
Air Compressor	81.00/Day
Jackhammer & Hose (1" dia.) & Bit	45.00/Day
Pneumatic Drill	103.00/Day
Acetylene Torch	25.00/Day
Wrecking Ball	78.00/Day
Bobcat - 900/1300 lb. capacity	141.00/Day
Extendahoe	40.00/Hr.
Excavator PC220	78.00/Hr.
Roller Compactor w/vibrator 66	57.00/Hr.
Crane up 18 Ton	58.50/Hr.
Crane up 65 Ton	150.00/Hr.
Dump Truck w/Driver	55.00/Hr.
Triaxle Truck w/Driver	65.00/Hr.
Vacuum Truck w/Driver	105.00/Hr.
Drum Vac	12.50/Hr.

NOTE: **Construction Equipment Rates are for KES equipment. If not available, equipment will be rented and charged at rental rate costs + 15%.**

Koester Environmental Services, Inc.
Schedule of Fees
Revised / Effective March 29, 1998

Drilling and Drilling Support Equipment:	
Mobilization	Quoted Per Occurrence/Dependent upon Equipment
Auger Rotary Drill Mounted on Ford Chassis	155.00/Hr.
Centrifugal/Submersible Pump	78.00/Day
Large Volume Pump	52.00/Day
Shelby Tube	16.00/Each
Split Spoon Samples	13.00/Each
Monitoring Equipment:	
Air Flow Monitor	52.00/Day
Combustible Gas Meter	16.00/Hr.
Draeger Sampler	16.00/Hr.
Field GC	412.00/Day
LEL/02 Meter	103.00/Day
Metal Detector	78.00/Day
Photo-Ionization Detector (PID)	55.00/Day
Protective and Safety Equipment:	
Cartridges	Cost + 10%
Caution Tape	Cost + 10%
EPA Level A Responder Suits	Per Occurrence
EPA Level B	250.00/Day/Man
EPA Level C	115.00/Day/Man
Manifold Air Supply	150.00/Day
Plastic Liner (6mil, 8mil, etc.)	Cost + 10%
Saranex-Chemical Suits	20.00/Each
Tyvek Suits	16.00/Each
Barricades	42.00/Day
Cones	2.25/Each/Day
Flashing Arrow	155.00/Day
Signs	16.00/Day
Snow Fence	2.25/Foot/Day
Decontamination	Per Occurrence
Sampling Equipment:	
Air Sampling Pump	78.00/Day
Bailer(s)/Dedicated	16.00/Day
GC Sampling Equipment	31.00/Day
Colliwassa	25.00/Each
Hand Auger	16.00/Day
Sampling Containers	3.25/Each

Koester Environmental Services, Inc.
Schedule of Fees
Revised / Effective March 29, 1998

Laboratory Analysis:

Method 8015 TPH	Cost + 15%
Method 8020 BTEX	Cost + 15%
TCLP Volatiles	Cost + 15%
TCLP Metals	Cost + 15%
Full TCLP	Cost + 15%
PCBs	Cost + 15%
RCI	Cost + 15%

Materials, Expenses, Vehicles, and Mileage:

Materials	Actual + 20%
Expenses	Actual + 20%
Truck, Pickup (unlimited miles)	68.00/Day
Car (unlimited miles)	60.00/Day
Mileage, Car	0.38/Mile
Mileage, Pickup Truck	0.43/Mile

UST Remediation:

Permitting Disposal of Petroleum Contaminated Soil	750.00/Waste Stream
Loading, Transportation, and Disposal of Non-Hazardous special solid waste.	$TBD
Site Characterization and/or Investigation	$TBD
Remedial Investigation and Feasibility Study	$TBD (based on the amount and type of contamination)
Corrective Action Plan (CAP)	$TBD

Demolition - Furnish labor, tools and equipment to demolish concrete slab and haul off site as follows (disposal not included):

6" thick concrete with wire mesh	1.95/Sq.Ft.
8" thick concrete with #4 rebars one mat	2.50/Sq.Ft.
12" thick concrete with #5 rebars two mats	4.50/Sq.Ft.

Additional backfilling to replace contaminated soil from tank excavation and repiping trenches and compaction to ASTM standard (price to include normal estimated costs to purchase, transport, and place material with standard compaction to 95% [standard proctor]):

Fill sand	15.00/Ton
Clean Dirt	18.00/Ton
Crushed Stone	20.00/Ton
Pea Gravel	16.00/Ton

Surface Restoration - KES will furnish labor, material, tools, equipment and supervision to perform the following:

Concrete paving with 6" thick concrete with wire mesh 6" x 6" 6/6 and 4000 PSI compressive strength after 28 days at ..... 5.50/Sq.Ft.

Concrete paving with 8" thick concrete with #4 rebar 12 o.c. each way, one mat and 4000 PSI after 28 days at ..... 6.50/Sq.Ft.

Blacktop paving with normal strength 6" thick base of compacted crushed stone, 3" binder, 1" surface at ..... 4.50/Sq.Ft.

Blacktop paving with high strength 10" thick base of compacted crushed stone, 4" binder, 1" surface at ..... 6.50/Sq.Ft.

KOESTER™
ENVIRONMENTAL SERVICES, INC.
"Employee Owned"

14649 Highway 41 North • Evansville, IN 47711
(812) 867-0100 • Fax (812) 867-4478
www.koesterco.com
1-888-KOESTER

SPECIFIC SERVICES AGREEMENT
(EMERGENCY RESPONSE SERVICE)
8E80574

This Agreement entered into by and between **GM Powertrain Group, GM Corporation (Bedford Plant)** with its mailing address at **105 GM Drive, Bedford, IN 47421, Contact: William Schoonmaker, PE, CHMM Phone: 812-279-7308 Fax: 812-279-7258** (hereinafter referred to as "Client"), and Koester Environmental Services, Inc. (hereinafter referred to as "KES");

1. **Details of Emergency.** (Identify known facts and conditions that requires emergency response action.)

   Annual Specific Service Agreement to provide labor, equipment and materials necessary to perform emergency spill response and clean-up for hazardous materials accidentally released into the environment by representatives or property of GM Powertrain Group, GM Corporation (hereinafter referred to as the "Emergency").

2. **Location.**

   Bedford Plant located at 105 GM Drive in Bedford, Indiana

3. **Services.** KES shall furnish labor, material and equipment for the Services necessary to respond to the Emergency in accordance with local, state, and federal regulations. KES shall attempt to stabilize, control or contain the Emergency within a reasonable time to prevent contamination and danger to the public and/or the environment. Actions taken by KES shall be based on the facts and information regarding the Emergency as set forth in paragraph 1 (hereinafter referred to as the "Services"). Client shall promptly inform KES in the event additional information concerning the Emergency becomes available.

4. **Price and Billing.** KES shall furnish labor, material and equipment for the Services necessary to respond to the Emergency in accordance with local, state, and federal regulations in association with the Equipment/Price List attached (see attachment A).

5. **Unknown Conditions.** Client understands and agrees that the exact Services needed to remedy the Emergency cannot be foreseen. The exact Services to be rendered will be determined by KES in consultation with participating parties pursuant to the circumstances of each situation and are hereby authorized by Client; provided, however, that if time allows, any extreme conditions not set forth in paragraph 1 of this Agreement shall be discussed with Client to determine such action to be taken.

6. **Inability to Respond.** Client understands that while KES will attempt to respond to the circumstances that may arise, KES does not guarantee that it will be able to respond to all situations.

7. **Certifications.** KES shall maintain its certification by applicable local, state and federal statutes and regulations to perform this class of environmental services.

8. **Notices.** All applicable notices of the Emergency and Services to governmental agencies or authorities are solely the responsibility of the Client unless the Client direct KES to notify appropriate entities.

9. **Authority.** Each individual executing this Agreement on behalf of the parties hereto represents and warrants that they are duly authorized to execute and deliver this Agreement on behalf of their respective companies or entities.

10. **Miscellaneous.** Client agrees and acknowledges that it shall submit all sums owed to KES under this Agreement within 30 days of the date of the invoice. Client agrees to pay a 1.5% carrying charge per month on all amounts not paid within 30 days from the date of invoice. Client shall pay any and all costs and attorneys' fees that KES incurs in pursuing any collection of fees owed under this agreement.

11. **Effective Date.** This Agreement is effective immediately for one (1) year upon the execution of contract.

WITNESSETH THAT:

For and in consideration of the mutual promises, covenants, and agreements herein contained and agreed to be kept and performed by the parties hereby, the parties hereto do hereby mutually agree and understand the Agreement. The contract documents consist of this Agreement and the General Contract Conditions. This Agreement and the General Contract Conditions form the complete agreement of the parties. The General Contract Conditions is incorporated into this Agreement and is a part of this Agreement as if attached to this Agreement and repeated herein in its entirety. This Agreement and the General Contract Conditions represent the entire and integrated agreement between the parties hereto and supersede prior negotiations, representations or agreements, either written or oral.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands.

KOESTER ENVIRONMENTAL SERVICES, INC.

Dated: September 24, 1998

By: William A. Shoulders

W. A. (Andy) Shoulders
Director of ~~Hazmat~~/Field Operations

By: Eric B. Dodd

Eric B. Dodd
President/CEO

GM Powertrain Group, GM Corporation

Dated: 9/28/98

By: Wm Schoonmaker

Signature

Wm Schoonmaker

Printed Name

ENV. MANAGER

Title

ATTACHMENT A

KOESTER ENVIRONMENTAL SERVICES, INC.
EMERGENCY RESPONSE PRICE LIST

CODE	QUANTITY	DESCRIPTON	UNIT	STANDARD	OVERTIME
14000		MOBILIZATION	LS	$500.00	$500.00
CODE		**DESCRIPTON**	**UNIT**	**STANDARD**	**OVERTIME**
14100		PERSONNEL			
14101	____	PROJECT MANAGER	HOUR	$88.00	$88.00
14102	____	ENVIRONMENTAL SCIENTIST	HOUR	$65.00	$65.00
14103	____	SAFETY/SUPERVISOR	HOUR	$50.00	$50.00
14104	____	ENVIRONMENTAL TECHNICIAN	HOUR	$42.00	$63.00
14105	____	EQUIPMENT OPERATOR/TRUCK DR.	HOUR	$29.00	$43.50
14106	____	TECHNICIAN	HOUR	$19.00	$28.00
14107	____	PER DIEM	DAY	75.00	
CODE		**DESCRIPTON**	**UNIT**	**STANDARD**	**OVERTIME**
14200		TRANSPORTATION EQUIPMENT			
14201	____	AUTOMOBILE	DAY	$ 65.00	
14202	____	PICK UP	DAY	$ 72.00	
14203	____	CREW CAB PICKUP TRUCK	DAY	$ 88.00	
14204	____	FOUR WHEEL DRIVE PICKUP TRUCK	DAY	$ 90.00	
14205	____	SERVICE TRUCK	DAY	$ 90.00	
14206	____	VAC TRUCK (3,200 GAL)	HOUR	$115.00	
14207	____	BOX TRUCK	DAY	$350.00	
14208	____	EMER. RESPONSE VAN W/TRAILER	DAY	$300.00	
14209	____	EMER. RESPONSE TRAILER(24FT)	DAY	$240.00	
14210	____	EQUIPMENT TRAILER	DAY	$ 80.00	
14211	____	DUMP TRUCK SINGLE AXLE	HOUR	$ 50.00	
14212	____	DUMP TRUCK TANDEM/TRI-AXLE	HOUR	$ 65.00	
14213	____	SEMI TRACTOR	DAY	$330.00	
14214	____	LOW-BOY/FLAT BED TRAILER	DAY	$160.00	
14215	____	FUEL/MECHANICS TRUCK	DAY	$ 98.00	
14216	____	OFFICE TRAILER	DAY	$ 65.00	
14217	____	DECON TRAILER	DAY	$310.00	
CODE		**DESCRIPTON**	**UNIT**	**STANDARD**	**OVERTIME**
14300		RECOVERY EQUIPMENT			
14301	____	WORK BOAT DIESEL TUG (30 FT.)	12 HOUR	$1140.00	
14302	____	WORK BOAT (19 FT.)	12 HOURS	$400.00	
14303	____	WORK BOAT (17 FT.)	12 HOURS	$350.00	
14304	____	OIL SKIMMER (36" DRUM)	12 HOURS	$600.00	
14305	____	OIL SKIMMER (18" DRUM)	12 HOURS	$540.00	
14306	____	DIESEL DRIVE HYDRAULIC POWER PK	12 HOURS	$300.00	
14307	____	SKIRTED BOOM (19")	PER DAY	$1.35/FT	
14308	____	SKIRTED BOOM (9")	PER DAY	$1.10/FT	
14309	____	DRUM VAC	PER DAY	$100.00	
14310	____	FRAC TANK (20,000 GALLON)	PER DAY	$ 70.00	(7 DAY MINIMUM)
14311	____	POLY TANK (2,000 GALLON)	PER DAY	$ 80.00	
14312	____	CONTAINMENT POND (7,000 GALLON)	PER DAY	$ 80.00	
14313	____	CONTAINMENT POND (2,000 GALLON)	PER DAY	$ 80.00	
14314	____	POLYPROPYLENE DIAPHRAGM PUMP	PER DAY	$150.00	
14315	____	DIAPHRAGM PUMPS (2"/3")	PER DAY	$ 50.00	
14316	____	TRASH PUMPS (3"/4")	PER DAY	$100.00	
14317	____	ANCHORS	PER DAY	$ 15.00	
CODE		**DESCRIPTON**	**UNIT**	**STANDARD**	**OVERTIME**
14400		HEAVY EQUIPMENT			
14401	____	BACKHOE 4X4	DAY	$400.00	
14402	____	EXTENDAHOE 4X4	DAY	$450.00	
14403	____	TRACKHOE PC 150	DAY	$650.00	
14404	____	TRACKHOE PC 220	DAY	$750.00	
14405	____	FRONT-END LOADER	DAY	$750.00	
14406	____	HIGH LIFT BULLDOZER	DAY	$600.00	
14407	____	BOBCAT	DAY	$240.00	
14408	____	AIR COMPRESSOR	DAY	$150.00	
14409	____	PRESSURE WASHER	DAY	$ 95.00	

CODE		DESCRIPTON	UNIT	STANDARD	OVERTIME
14500		EQUIPMENT AND TOOLS			
14501	____	CHAIN SAW	DAY	$ 45.00	
14502	____	BLOWERS	DAY	$ 45.00	

CODE		DESCRIPTON	UNIT	STANDARD	OVERTIME
14500		EQUIPMENT AND TOOLS (CON'T)			
14503	____	GENERATOR	DAY	$200.00	
14504	____	SATELLITE LIGHT TOWER	DAY	$140.00	
14505	____	LIGHT TOWER	DAY	$ 50.00	
14506	____	SPARK PROOF TOOLS	DAY	$ 65.00	
14507	____	HAND TOOLS	DAY	$ 45.00	
14508	____	MERCURY VAC	DAY	$150.00	
14509	____	FLAIRING EQUIPMENT	DAY	$400.00	

CODE		DESCRIPTON	UNIT	STANDARD	OVERTIME
14500		EQUIPMENT AND TOOLS			
14510	____	SAFETY SHOWER	DAY	$ 75.00	
14511	____	EYE WASH STATION	DAY	$ 30.00	
14600	____	PERSONAL PROTECTION EQUIPMENT			
14601	____	LEVEL A PROTECTION	DAY	$300.00	
14602	____	LEVEL B PROTECTION	DAY	$250.00	
14603	____	LEVEL C PROTECTION	DAY	$115.00	
14604	____	FLASH PROTECTION	DAY	$100.00	
14605	____	TURNOUT GEAR	DAY	$100.00	
14606	____	SELF CONT BREATHING APPARATUS	DAY	$150.00	

CODE		DESCRIPTON	UNIT	STANDARD	OVERTIME
14700		HAZMAT REPAIR KITS - MONITORING EQUIPMENT			
14701	____	CHLORINE KIT A	PER DAY	$500.00	
14702	____	CHLORINE KIT B	PER DAY	$500.00	
14703	____	CHLORINE KIT C	PER DAY	$500.00	
14704	____	HAZMAT SPILL KITS A-2/C-1/C-2/A-E	PER ITEM	$ 25.00	
14705	____	MSA PASSPORT	PER DAY	$100.00	
14706	____	PHOTO IONIZATION DETECTOR	/PER DAY	$100.00	
14707	____	SENSIDYNE DRAGERTUBES	PER DAY	$150.00	
14708	____	PH PAPER	PER DAY	$ 10.00	
14709	____	PCBS TEST KIT	PER DAY	$ 50.00	
14710	____	WEATHER STATION	PER DAY	$ 70.00	

CODE		DESCRIPTON	UNIT	STANDARD	OVERTIME
14800		EXPENDABLES			
14801	____	CAUTION TAPE	PER ROLL	$ 15.00	
14802	____	ABSORBENT COMPOUND	PER BAG	$ 10.00	
14803	____	ABSORBENT ROLL	PER ROLL	$135.00	
14804	____	ABSORBENT PADS	PER BALE	$ 50.50	
14805	____	ABSORBENT BOOM 4"	PER BOOM	$ 47.50	
14806	____	ABSORBENT BOOM 8"	PER BOOM	$ 49.00	
14807	____	STEEL 85 GALLON DRUM	EACH	$155.00	
14808	____	POLY 95 GALLON DRUM	EACH	$190.00	
14809	____	STEEL 55 GALLON DRUM	EACH	$ 65.00	
14810	____	STEEL 8 GALLON DRUM	EACH	$ 50.00	
14811	____	PLASTIC PAILS 5 GALLON	EACH	$ 5.00	
14812	____	PLASTIC ROLL	PER ROLL	$ 75.00	
14813	____	CPF-1	EACH	$ 10.60	
14814	____	CPF-2	EACH	$ 18.90	
14815	____	CPF-3	EACH	$ 30.60	
14816	____	GREEN ACID SUITS	EACH	$65.00	
14817	____	SARANEX SUITS	EACH	$ 20.00	
14818	____	DISPOSAL BOOTIES	EACH	$ 5.00	
14819	____	PCB GLOVES	PER PAIR	$ 25.00	
14820	____	SURGICAL GLOVES	PER BOX	$ 25.00	
14821	____	PVC GLOVES	PER PAIR	$ 8.00	
14822	____	SILVER SHIELD GLOVES	PER PAIR	$ 5.00	
14823	____	NEOPRENE GLOVES	PER PAIR	$ 12.00	
14824	____	NEOPRENE BOOTS	PER PAIR	$ 75.00	
14825	____	YELLOW POLY ROPE	PER ROLL	$ 85.00	
14826	____	HIP WADERS	PER PAIR	$ 75.00	
14827	____	RESPIRATOR CARTRIDGES	PER PAIR	$ 18.00	
14828	____	HIGH ALKALINE INDUSTRIAL SOAP	/BTL	$ 8.00	
14829	____	ORGANIC DEGREASER	5 GALLONS	$120.00	

ATTACHMENT A

CODE		DESCRIPTON	UNIT	STANDARD	OVERTIME
14900		**COMMUNICATIONS**			
14901	____	MOBILE PHONE	PER MINUTE	$ 1.50	
14902	____	PORTABLE RADIOS	PER DAY	$ 80.00	
14903	____	MARINE RADIOS	PER DAY	$ 80.00	
14904	____	FAX MACHINE	PER DAY	$ 55.00	
14905	____	FIELD COMPUTER	PER DAY	$ 75.00	

CODE		DESCRIPTON	UNIT	STANDARD
14950		**OTHER SERVICES**		
14951	____	EXPENDABLE PURCHASES AND/OR EQUIPMENT RENTAL		COST + 20%
14952	____	EQUIPMENT REPLACEMENT		COST + 20%

ALL HOURLY RATES ARE PORTAL TO PORTAL
I HAVE REVIEWED AND AGREE TO PAY THE ABOVE LISTED PRICES FOR ANY SERVICES OR ITEMS USED DURING THIS EMERGENCY RESPONSE.

SIGNED _____ DATE _____
(REPRESENTATIVE)

WITNESS _____ DATE _____
(KOESTER ENVIRONMENTAL SERVICES)

ENVIRONMENTAL EMERGENCY SPILL RESPONSE AREA

14649 Hwy 41 North
Evansville, IN 47711
(812) 867-0100

EMERGENCY SPILL
(800) 448-4931



900 Manufacturers Road
Chattanooga, TN 37405
(423) 265-9551

EMERGENCY SPILL
(800) 925-9551

GENERAL CONTRACT CONDITIONS

Client and Koester Environmental Services, Inc., an Indiana corporation (hereinafter referred to as "KES"), agree that the following provisions shall be a part of their Agreement, in conjunction with all terms contained in the Specific Services Agreement, which is incorporated herein by reference:

1. **Definitions.** The following definitions shall apply to this Agreement and all interpretations of the relationship between the parties.

   1.1 "Client" refers to the individual(s) or entity which enters into this agreement with KES for the purpose of securing the Services of KES.

   1.2 "Specific Services Agreement" is the Specific Services Agreement executed by and between the Client and KES that outlines the specific activities which KES is to perform for the Client.

   1.3 "Site" is the location where KES is to perform Services according to the description in the Specific Services Agreement.

   1.4 "Services" are those activities which the Client has obtained KES to perform.

   1.5 "Contract Documents" includes the Specific Services Agreement and these General Contract Conditions. The General Contract Conditions is incorporated into the Specific Services Agreement and is a part of the Specific Services Agreement. The Specific Services Agreement and the General Contract Conditions represent the entire agreement between the parties hereto.

   1.6 "Agreement" shall include the terms and conditions of this General Contract Conditions and those terms and conditions of the Specific Services Agreement.

2. **Client Responsibilities.**

   2.1 **Site Access.** Client shall provide KES, its employees, agents, and subcontractors with right-of-entry and access to all areas of the Site, and Client hereby specifically warrants to KES that all KES employees shall have the right to enter and remain at the Site while KES is performing Services thereon for the Client. Client further agrees to cooperate with KES to keep all areas under KES's direction free of all unauthorized persons and all property within relative distance of KES's activities free from activities of the Client which may disturb, inhibit or endanger KES's activities and to ensure the safety of all ongoing operations to the extent of the Client's control over actions in any such areas.

3. **KES's Responsibilities.**

   3.1 **Standard of Performance.** KES shall perform all work in accordance with commonly accepted scientific, environmental and engineering practices and in a professional and workmanlike manner.

   3.2 **Confidentiality.** KES shall hold confidential all business or technical information obtained or generated in the performance of Services for the Client. KES shall not disclose any such information without the Client's consent except to the extent reasonably believed necessary for:

   (a) Compliance with professional standards of conduct for the preservation of public health, safety, and welfare;

   (b) Compliance with a court order or government directive; or

   KES is under no obligation or responsibility to actively oppose the compelled disclosure of any confidential information. If the Client actively opposes any proceeding to obtain confidential information, it shall do so at its own cost, including the cost of actively opposing any proceedings intended to compel KES to disclose information.

   KES also agrees to execute appropriate confidentiality agreements of Client as required.

4. **Indemnification.** Each party shall indemnify, defend and hold harmless, and hereby forever releases, the other party and its affiliates, directors, officers, shareholders, employees, and agents from and against any and all claims, causes of action, and/or other costs which all or any one of them incur or for which all or any of them are held liable in connection with or rising from its negligent acts, omissions or misconduct.

5. **Force Majeure.** In no event shall KES have responsibility or liability to Client for any failure or delay in performance by KES which results, directly or indirectly, in whole or in part, from any causes or circumstances beyond the reasonable control of KES. Such causes and circumstances include, but not limited to, fires, floods, strikes, riots, sabotage, explosion, adverse weather conditions not reasonably anticipated, unavoidable casualties, unavailability or insufficiency of labor, materials, supplies, equipment, transportation or services, process shut down, equipment malfunction, acts of God, acts or omissions of Client, court orders, acts, orders or regulations of any governmental agency, loss of permits and delays in mail or delivery services. Work stoppage or interruption in the performance of Services under this Agreement caused by any of the above events may result in additional costs beyond those outlined by KES in the Specific Services Agreement, which shall entitle KES to an adjustment in the charges and fees for Services under this Agreement.

6. **Disclaimers and Limitations of Liability.**

   6.1 KES shall not be responsible for any non-compliance or offense which results from the action or inaction on behalf of governmental agencies, or of any change in regulations or laws relating to these Services or relating to the Site and any environmental contamination or danger caused thereby.

   6.2 KES may rely on all representations and information furnished by the Client to make decisions or recommendations regarding actions to be taken in the performance of this Agreement, and KES shall have no liability whatsoever for any occurrence that is a result, directly or indirectly, of misinformation, miscalculations, inaccurate statements, or false representations made by the Client, its employees or agents, to KES, whether such information was given negligently or intentionally.

   6.3 KES shall not be responsible for applications, notifications or any other disclosures that may be required by any local, state or federal governmental agencies unless KES specifically agrees to execute such documents in the Specific Services Agreement.

   6.4 KES may advise the Client regarding the status of the environmental conditions of the Site and potential courses of action for the Client. These recommendations shall in no way be construed as giving KES the authority to make or control environmental decisions, nor shall any recommendations be considered as legal advise, but only as information based on KES's activities.

   6.5 KES will be responsible to have marked utility lines or conduits in accordance with standard utility company guidelines to the property. The Client shall be responsible to locate, verify existence and mark the location of all utility lines or conduits within the construction Site/area. KES will not be liable for damage to any utility lines or conduits which have not been properly located and marked within the construction Site/area.

   6.6 Under no circumstances should this Agreement or any actions by KES cause KES to hold any of the incidents of ownership, title or responsibility for any of the waste, waste materials, substances, chemicals, contaminated products or property, or by-products or property located at the Site. Nothing contained within this Agreement shall be construed or interpreted to cause KES to hold the status of a owner or operator, generator or a storage, treatment or disposal facility (as those terms are defined by RCRA or any other federal, state or local law, statute, rule or regulation governing the generation, treatment, storage or disposal of hazardous

wastes; solid wastes or special wastes). Under all events KES is an independent contractor providing Services at the direction of the Client. If the Services include the transportation of waste materials from Client's premises or facilities, KES may evaluate and arrange possible transporters and disposal sites for Client's use and subject to the Client's direction. Under RCRA and the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601 et seq. amended ("CERCLA"), and regulations thereunder, Client, as the generator or owner of the waste or contaminated property, shall maintain the ultimate legal liability for the evaluation and "selection" of the proper transporters and disposal sites for its waste. Client hereby acknowledges that it shall be solely responsible as the party who arranges for the transportation and disposal of any waste or property in connection with this Agreement.

6.7 KES shall not be responsible for any release, leak, spill, or possible contamination that occurs while KES is on the Site or adjacent property which is not caused directly by the negligence of KES in its performance under this Agreement.

6.8 KES shall not be responsible for any contamination of products or raw materials which results from the proper operation of KES's activities, including but not limited to the removal of underground storage tanks, appurtenances thereto, soils, sludge, liquids, or any other waste materials, chemicals or petroleum products.

6.9 KES accepts no responsibility for the removal, treatment, disposal, or disposition of any hazardous materials that should be discovered during its operations or investigations that were not previously anticipated and addressed in the execution of the Specific Services Agreement.

6.10 Liability under this Agreement shall apply only if the Client notifies KES in writing of its claim against KES within one (1) year of the completion of the Services and such claim sets forth in reasonable detail all the facts upon which it is based. For purposes of this Agreement, KES will be considered to have completed its Services when KES vacates the Site, location and facilities where it was performing Services for a period of ten (10) consecutive calendar days.

7. **Substitution.** KES shall have the right to substitute substantially equivalent equipment and/or methodology for the performance of Services at its sole discretion.

8. **Termination.** KES may immediately terminate and cancel this Agreement and cease performing Services without liability to the Client under the following circumstances:

   (a) Client fails to make any payment to KES when such payment to KES is due; or

   (b) The discovery of any unknown or undisclosed conditions including, but not limited to, the presence of hazardous, toxic or other materials for which KES has not explicitly agreed to perform investigative or remedial activities in the Specific Services Agreement.

9. **Governing Law.** The validity, interpretation and performance of this Agreement shall be governed by and construed in accordance with the laws of the State of Indiana.

0. **Waiver.** No waiver of the terms, conditions and/or covenants of this Agreement shall be binding and effective unless the same shall be in writing signed by the parties. No waiver by either party of any provision or condition of this Agreement shall be construed or deemed to be a waiver of any other provision or condition of this Agreement, or a waiver of a subsequent breach of the same provision or condition, unless such waver is expressed in writing signed by the parties.

1. **Successors and Assigns.** This Agreement shall inure to the benefit of and be binding upon the successors and permitted assigns of the parties.

2. **Payment and Collection.** Client shall remit to KES all monies owed under this Agreement, as set forth in the Specific Services Agreement, within thirty (30) days of the date of the invoice. The Client shall pay to KES a 1.5% per month carrying fee on the total sum of any amount not paid within said thirty (30) days. In the event that KES obtains legal services to pursue the collection of the sums owed under this Agreement, then the Client shall pay all reasonable attorneys' fees, paralegal fees, accounting fees, and other costs and expenses incurred by KES in such collection efforts.

Attachment L

Arrangements with Clean-Up Contractors

)rking with Randy Angle in Purchasing on this project.

te March - Randy called to inform me that he had received my request for an MBO and wanted to know what spill response groups we wanted to set u the MBO. I mentioned a few firms we had worked with in the past, namely Spill Response of IN and Koester Environmental. He said he would query other plants in the area to see if they had a particular responder that they would recommend.

ril 28, 2000 - Left Randy a message to see if he had gotten enough information from the other plants or if he needed any help in collecting additional ormation. He is on vacation until May 1.

ne 6, 2000 - Called Randy to ask where he was at collecting information on Spill Contractors. He told me that Tim Renner from Delphi recommended ritage and then Spill Recovery of IN. Lee Langzlot recommended SSI. Randy will call SSI and Heritage to get a pricing list. He will lean towards usin il though since the MBO is for GM. He may get blankets for both...

y 25, 2000 - Received MBO for spill response!!! MBO #GMB06463 for Spill Recovery of Indiana. Will use price list dated 12-5-98 received by Randy m Stan Lucas (pages 1-4). Ft. Wayne and Metal Fab in Indy will also be assigned on this MBO - no other plants showed interest and he didn't want t it for their reply any longer.

Attachment M

Certificate of Liability Insurance from External Spill Responders

ACORD CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY) 05/31/2000

PRODUCER (317)464-5000 FAX (317)464-5001
McGowan Insurance Group, Inc.
1850 Market Tower
10 West Market Street
Indianapolis, IN 46204
Attn: Emily Colwell Ext: 122

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
Spill Recovery Of Indiana, Inc.
P.o. Box 34337
Indianapolis, IN 46234-0337

COMPANIES AFFORDING COVERAGE

COMPANY A: American International Specialty
COMPANY B: Commerce & Industry
COMPANY C: Monroe Guaranty Insurance
COMPANY D:

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS MADE X OCCUR OWNER'S & CONTRACTOR'S PROT X Professional Liabi	PRO 2678197	06/03/2000	06/03/2001	GENERAL AGGREGATE PRODUCTS - COMP/OP AGG PERSONAL & ADV INJURY EACH OCCURRENCE FIRE DAMAGE (Any one fire) MED EXP (Any one person)	$ 2,000,000 $ 2,000,000 $ 2,000,000 $ 2,000,000 $ 50,000 $ 5,000
B	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS	CA7665895	06/03/2000	06/03/2001	COMBINED SINGLE LIMIT BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE	$ 2,000,000 $ $ $
	GARAGE LIABILITY ANY AUTO				AUTO ONLY - EA ACCIDENT OTHER THAN AUTO ONLY: EACH ACCIDENT AGGREGATE	$ $ $
	EXCESS LIABILITY UMBRELLA FORM OTHER THAN UMBRELLA FORM				EACH OCCURRENCE AGGREGATE	$ $ $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY THE PROPRIETOR/ PARTNERS/EXECUTIVE OFFICERS ARE INCL / EXCL	WOO 0208723	01/18/2000	01/18/2001	W.C. STATUTORY LIMITS / OTHER EL EACH ACCIDENT EL DISEASE - POLICY LIMIT EL DISEASE - EA EMPLOYEE	$ 500000 $ 500000 $ 500000
	OTHER					

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE
Emily Colwell Emily Colwell

©ACORD CORPORATION 1992

ACORD CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY) 01/05/2001

PRODUCER (317)464-5000 FAX (317)464-5001
McGowan Insurance Group, Inc.
850 Market Tower
10 West Market Street
Indianapolis, IN 46204

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED Spill Recovery Of Indiana, Inc.
P.o. Box 34337
Indianapolis, IN 46234-0337

INSURERS AFFORDING COVERAGE

INSURER A:	American International Specialty
INSURER B:	Commerce & Industry
INSURER C:	Monroe Guaranty Insurance
INSURER D	
INSURER E	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
	GENERAL LIABILITY	PRD 2678197	06/03/2000	06/03/2001	EACH OCCURRENCE	$ 2,000,000
X	COMMERCIAL GENERAL LIABILITY				FIRE DAMAGE (Any one fire)	$ 50,000
	CLAIMS MADE [X] OCCUR				MED EXP (Any one person)	$ 5,000
X	Professional Liab				PERSONAL & ADV INJURY	$ 2,000,000
X	Pollution Liab				GENERAL AGGREGATE	$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:				PRODUCTS - COMP/OP AGG	$ 2,000,000
	POLICY PRO-JECT LOC					
	AUTOMOBILE LIABILITY	CA7665895	06/03/2000	06/03/2001	COMBINED SINGLE LIMIT (Ea accident)	$ 2,000,000
X	ANY AUTO				BODILY INJURY (Per person)	$
	ALL OWNED AUTOS				BODILY INJURY (Per accident)	$
	SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident)	$
	HIRED AUTOS					
	NON-OWNED AUTOS					
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
	ANY AUTO				OTHER THAN AUTO ONLY EA ACC	$
					AGG	$
	EXCESS LIABILITY				EACH OCCURRENCE	$
	OCCUR CLAIMS MADE				AGGREGATE	$
						$
	DEDUCTIBLE					$
	RETENTION $					$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	WOD 0208723	01/18/2001	01/18/2002	X STATUTORY LIMITS OTHER	
					E.L. EACH ACCIDENT	$ 500,000
					E.L. DISEASE - EA EMPLOYEE	$ 500,000
					E.L. DISEASE - POLICY LIMIT	$ 500,000
	OTHER					

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS

Certificate Holder is Additional Insured - Owner, Contractor or Lessee. $2,500 Deductible applies General Liability; $5,000 Deductible applies to Pollution and Professional Liability.

CERTIFICATE HOLDER | ADDITIONAL INSURED; INSURER LETTER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE
Emily Colwell Emily Colwell

Attachment A

Spill Response Team

SPILL RESPONSE TEAM

NAME	PHONE NUMBER	DEPARTMENT
Eric Prenevau	812-279-7216	Safety
Eva Smith	812-279-7261	Training
Kim Dobosenski	812-279-7404	Environmental
Tom Shirley	812-279-7374	Maintenance
Kenny Knust	812-279-7370	Maintenance
Duane Cunningham	812-279-7370	Maintenance
James Simmerman	812-279-7370	Maintenance
Mike Corbin	812-279-7027	Maintenance
James Wells	812-279-7004	Maintenance

Attachment B

Emergency Response Contract Companies

EMERGENCY RESPONSE CONTRACT COMPANIES

McIntrye Brothers Construction
1020 Seventh Street
Bedford, IN 47421
(812) 275-5956

Spill Recovery of Indiana
10635 US Highway 136
Indianapolis, IN 46234
(317) 291-3972

Koester Environmental Services Inc.
14649 Highway 41 North
Evansville, IN 47711
(812) 867-0100

Attachment C

Levels of Hazardous Material Spills

LEVELS OF HAZARDOUS MATERIALS SPILLS

There are four levels of hazardous materials spills. They are determined by their level of air contaminant and the equipment necessary to respond as described in Attachment B of 29 CFR Part 19140.120. Refer to Attachment C of this plan for the corresponding Personal Protection Equipment.

Level A Protection Should be Worn When

- The hazardous substance has been identified and requires the highest level of protection for skin, eyes, and respiratory system based on either the measured high concentration of atmospheric vapors, gases or particulates; or site operations and work functions involve a high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials that are harmful to skin or capable of being absorbed through the skin.
- Substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible; or
- Operations are being conducted in confined, poorly ventilated areas, and the absence of conditions requiring Level A have not been determined.

  Air contaminant: 500 ppm to 1,000 ppm above background

Level B Protection should be worn when

- The type and atmospheric concentration of substances have been identified and require a high level of respiratory protection, but less skin protection.
- The atmosphere less than 19.5 percent oxygen; or
- The presence of incompletely identified vapors or gases is indicated by a direct reading organic vapor detection instrument, but vapors and gases are not suspected of containing high levels of chemicals harmful to skin or capable of being absorbed through the skin.

  Air containment: 5 ppm to 500 ppm above background

Level C Protection should be worn when

- The atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect or be absorbed through any exposed skin.
- The types of air containment's have been identified, concentrations measured and an air-purifying respirator is available that can remove contaminants; and
- All criteria for the use of air-purifying respirators are met.
- Air containment: Background to 5 ppm above background

Level D Protection should be worn when

- The atmosphere contains no known hazard; and
- Work functions preclude splashes, immersion, or the potential for unexpected inhalation of or contact with hazardous levels of any chemicals.
- Air contaminant: 0 to Background

The personnel at GM Bedford are only trained to First Responder Awareness and Operations Level. They will be expected to respond to spills requiring Level D protection only. The Emergency Response Contractors have been retained to respond to spills requiring Level A, B, and C protection equipment.

Attachment D

Personal Protective Equipment

PERSONAL PROTECTIVE EQUIPMENT LEVEL A

- Supplied-air respirator approved by the Mine Safety and Health Administration (MSHA) and National Institute for Occupational Safety and Health (NIOSH).
- Respirators may be:

  Pressure-demand, self-contained breathing apparatus (SCBA)

  or

  Pressure-demand, air line respirator (with escape bottle for Immediately Dangerous to Life and Health IDLH or potential for IDLD atmosphere)
- Fully encapsulating chemical-resistant suit
- Coveralls
- Gloves (inner), chemical resistant
- Boots, chemical-resistant, steel toe and shank
- Hard hat (under suit)
- Disposable gloves and boot covers (worn over fully encapsulating suit)
- Cooling unit or thermal underwear as weather dictates
- 2-way radio communication
- Seal all joints between protective clothing hems with duct tape

PERSONAL PROTECTIVE EQUIPMENT, LEVEL B

- Supplied-air respirator (MSHA/NIOSH approved)

  SCBA

  or

  Airline respirator (pressure demand)

- Chemical-resistant clothing (overalls and long-sleeved jacket; hooded, one or two-piece chemical splash suit; disposable chemical-resistant, one-piece suits)
- Coveralls
- Gloves (outer), chemical resistant
- Gloves (inner), chemical resistant
- Boots (outer), chemical resistant (disposable)
- Hard hat
- 2-way radio communication
- Use duct tape to secure all joints between clothing items such as cuffs

Appendix 1

Certification of the Applicability of the Substantial Harm Criteria

Certification of the Applicability of the Substantial Harm Criteria

Facility Name:
GM Powertrain Bedford

Facility Address:
105 GM Drive

Bedford, IN 47421

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

   Yes _____ No __X__

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

   Yes _____ No __X__

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

   Yes _____ No __X__

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility would shut down a public drinking water intake?

   Yes _____ No __X__

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

   Yes _____ No __X__

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information. I believe that the submitted information is true, accurate, and complete.

Signature _____

Title Plant Manager

Name John Thomas

Date 11-25-98

(please type or print)

OIL STORAGE CAPACITY WORKSHEET[1]

Capacity Item:

1. Bulk Oil Storage

Tanks	5750	gallons
Drums	2750	gallons
Totes	14400	gallons
Other	N/A	gallons

SUBTOTAL 1: 22900 GALLONS

2. Waste Water Treatment Facility

Skim Oil Tanks	2000	gallons
Other Tanks (with concentrated oil)	N/A	gallons
Remaining Treatment Facility (% oil * capacity)	1000	gallons

SUBTOTAL 2: 3000 GALLONS

3. Threshold Determinations

TOTAL OF SUBTOTALS 1 & 2: 25,900 GALLONS

[If <u>under</u> 500,000 gallons, enter total at bottom of page 2 in category (A), no need to do steps 4 & 5.]

[1] Please attach all reference data and any capacity tables (e.g., material inventory tables found in SPCC Plans) used in the oil storage calculations to show how the summation was derived.

OIL STORAGE CAPACITY WORKSHEET
(PAGE 2)

4. Coolant Transfer Systems (% oil * system capacity)

In-Plant Process Operations _____ gallons

In-Plant Piping _____ gallons

SUBTOTAL 4: _____ GALLONS

5. Machinery / Hydraulic Systems

Equipment Reservoirs _____ gallons

Transformers _____ gallons

Other Significant
Equipment / Systems _____ gallons

SUBTOTAL 5: _____ GALLONS

[Enter subtotals 4 & 5 at bottom in category (B)]

Total Oil Storage Capacity:

A) TOTAL OF SUBTOTALS 1 & 2: 25,900 GALLONS

B) TOTAL OF SUBTOTALS 4 & 5: _____ GALLONS

C) TOTAL OF SUBTOTALS 1,2,4, & 5: 25,900 GALLONS

Appendix 2

PCB Addendum

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
RELEASE PLAN
PCB ADDENDUM

PCBs were used in the past in the hydraulic equipment on-site. After significant clean-up efforts in the plant, and significant testing of the hydraulic fluid, there is no known remaining PCB liquid (i.e. liquid containing greater than 50 ppm PCBs) on-site. However, if PCBs above 50 ppm are discovered in used hydraulic fluid, it will be placed in the PCB storage area, located in the waste management area.

Appendix 3

Emergency Spill Response Plan (HAZWOPER)

GENERAL MOTORS CORPORATION
BEDFORD PLANT
BEDFORD, INDIANA
EMERGENCY RESPONSE PLAN (HAZWOPER)

PURPOSE

This HAZWOPER Plan was designed to minimize potential hazards to human health or the environment from any unplanned sudden or non-sudden release of a hazardous substance. It was developed in compliance with the Code of Federal Regulations 29 CFR 1910.120. The Plan outlines the steps necessary to effectively respond to an emergency.

GM Bedford takes every precaution in preventing spills. However, if a spill occurs the designated Maintenance Supervisors, the Emergency Coordinator, and the Health & Safety Contacts will act at the First Responder Operations Level and determine if outside help is needed. The Maintenance Supervisors, the Emergency Coordinator, or the Health & Safety Contacts will contact outside contractors to act as the spill response team, if necessary.

The Plan will be reviewed annually by representatives from the Environmental Engineering and Health and Safety Departments. Revisions to the program will be made on an as-needed basis. The HAZWOPER plan is a stand alone document and is separate from the SPCC Plan.

DEFINITION

Emergency response or responding to emergencies means a response effort by employees from outside the immediate release area or by other designated responders (e.g., mutual-aid groups, local fire departments, etc.) to an occurrence which results or is likely to result in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized or otherwise controlled at the time of release by employees in the immediate release area or by maintenance personnel are not considered to be emergency responses. Responses to releases of hazardous substances where there is no potential safety or health hazard (e.g., fire, explosion or chemical exposure) are not considered to be emergency responses.

EMERGENCY CONTROL CENTER

The Safety Conference Room serves as the Emergency Command Center. The emergency number is 7333 and is staffed 24-hours a day by Security Personnel. In case of a fire or explosion, fire alarm pullboxes are located throughout the plant and can be activated to signal the Security Office of the location of the fire or explosion.

SPILL RESPONSE TEAM REQUIREMENTS

Training

Participants of the spill response team, which includes members of the safety, maintenance and environmental departments, attend initial training as detailed in 29 CFR 1910.120 and are able to demonstrate competency in the specific level of training. Team members receive annual refresher training of sufficient content and duration to maintain their level of competency. The training records are maintained in the Training Department.

Medical Surveillance

All members of the spill response team undergo medical surveillance prior to assignment and at least every 12 months unless the Plant Medical Director believes a longer interval is appropriate; not longer than every other year. Refer to Attachment A for a list of the spill response team.

Respirators

All members of the spill response team are able to consistently pass respirator fit test. No beard growth of greater than one day is the guideline for facial hair as one day's growth may interfere with the respirator to face seal.

Bedford employees act only to First Responder Operations Level and therefore will not be required to use respirators.

SPILL RESPONSE TEAM

In a plant emergency, all members of management are responsible for providing leadership assistance and for implementing precautions to contain and minimize the effects of a natural or man-made emergency or disaster on the personnel and property under their control. Refer to Attachment A for a listing of the Spill Response Team and Attachment B for the Emergency Response Contract Companies.

Skilled Support Personnel

Personnel, not necessarily an employer's own personnel who are skilled in the operation of certain equipment such as mechanized earth moving or digging equipment or crane and hoisting equipment, and who are needed temporarily to perform immediate emergency support work are not required to meet the training for the employer's regular employees. These personnel should be given an initial briefing at the site prior to participation in any emergency response.

Specialist Employees

Employees, who, in the course of their regular job duties, work with and are trained in the hazards of specific hazardous substances, and may be called upon to provide technical advice or assistance at a hazardous substance release. Specialist employees are trained to varying levels of responsibility. If on-site employees are not trained to the varying levels of spill response, outside contractors will be called upon to assist in an emergency. The different levels of training for the spill response team consist of:

First Responder Awareness Level

First responder at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities. First responder at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

- An understanding of what hazardous substances are, and the risks associated with them in an incident.
- An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.
- The ability to recognize the presence of hazardous substances in an emergency.
- The ability to identify the hazardous substances, if possible.
- An understanding of the role of the first responder awareness individual in the employer's emergency response plan including site security and control and the U.S. Department of Transportation's Emergency Response Guidebook.
- The ability to realize the need for additional resources, and to make appropriate notifications to the communication center.

Although all employees at Bedford Powertrain have received some awareness training in what to do in the event of a hazardous material release, only some employees (e.g. the spill response team) are trained to the First Responder Awareness Level.

First Responder Operations Level

First responder at the operations level are individuals who respond to releases of hazardous substances as part of the initial response to the site for the purpose of

protecting nearby person, property or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading and prevent exposures.

The GM Bedford Powertrain emergency coordinator (i.e. environmental engineer) and alternate coordinators (i.e. designated Maintenance Supervisors and Health & Safety Contacts) are trained to the First Responder Operations Level.

Hazardous Materials Technician

Hazardous materials technicians are individuals who respond to releases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch or otherwise stop the release of a hazardous substance.

If necessary, General Motors Bedford hires contract companies to respond as Hazardous Materials Technicians.

Hazardous Materials Specialists

Hazardous materials specialists are individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however, their duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The Hazardous Materials Specialist also acts as the site liaison with Federal, state, local and other government authorities in regards to site activities.

If necessary, General Motors hires contract companies to respond as Hazardous Materials Specialists.

On Scene Incident Commander

Incident commanders assume control of the incident scene beyond the First Responder Awareness Level. It is the responsibility of the Incident Commander to contact outside emergency personnel if deemed necessary. Telephone numbers of outside contractors that may assist in clean-up and response are located in Attachment B.

If necessary, General Motors hires contract companies to respond as the On Scene Incident Commander.

Environmental Engineering Department has established contacts with local police, fire departments and outside emergency response contractors for use in the event an emergency condition which exists beyond the ability of the on-site spill response team members.

Emergency Recognition and Prevention

Procedures and Training

The Bedford Plant has developed procedures to be followed in order to minimize the potential for an unintentional release of hazardous materials or hazardous wastes. The procedures are in common use by the Bedford Plant employees and are integral part of the annual training program given to new and current employees.

Security

Security guards are present at the facility 24 hours a day. The guards control all entry to and departures from the plant. The entire GM Powertrain Bedford facility is fenced with guarded access gates. The facility is well lit on the exterior as well as the interior of the plant. A phone is available in the hazardous waste accumulation area as a means of direct communication.

Emergency Alarm System

A warning or alarm system will be utilized in the event an evacuation is necessary. The warning system consists of a plant wide annunciation system. An alarm system will be used to distinguish the need for evacuation or the all clear. Refer to the Disaster Preparedness Plan for the disaster code system.

Spill Discovery

Any employee who discovers or is involved in a spill or release of chemical materials or hazardous waste shall:

1. Direct all people to immediately leave the area if the spill or release presents an immediate hazard to health or safety.
2. Immediately stop the leaking material if there is sufficient knowledge of the spilled material and no immediate danger to personnel.
3. Contain the spilled material using any available means, including diking, absorbents, dirt, etc., if there is sufficient knowledge of the spilled material and no immediate danger to personnel.

4. Call Security at 7333. The caller should be prepared to provide the following information:

   - Location of spill
   - Site topography and accessibility (i.e., confined space, open areas, soil, paved area, etc.)
   - Type of spill
     1. a spill to storm system off plant property
     2. a spill to sanitary sewer off plant property
     3. a spill to storm system that remains on plant property (reaches soil or storm sewers)
     4. a spill that does not reach soil or storm sewer
     5. a spill by railroad
   - Specific information as to the material spilled, such as product name, ingredients, order number, use, hazard (i.e., flammability, corrosiveness, etc.)
   - Total quantity released
   - Amount, if any, that entered the storm sewer drain/system
   - Any injuries or ill effects
   - Number of people and equipment at hand to assist in cleanup
   - Containment action taken

EMERGENCY RESPONSE PROCEDURES

When notification to the Security Department is made as detailed above, a member of the spill response team (i.e. Maintenance Supervisor, Emergency Coordinator, or Health & Safety Contact) will be dispatched to the scene. This person will assume responsibility at the First Responder Operations Level and make the determination if the incident represents a HAZWOPER emergency response as defined by this plan. At the time it is determined that a HAZWOPER emergency response is required, the designated person will make contact with the Security Consòle Officer to advise of the findings.

Personal Protection Equipment

Based upon the results of the preliminary site evaluation, an ensemble of Personal Protection Equipment (PPE) will be elected and used during initial site entry which will provide protection to a level of exposure below permissible exposure limits. If the

preliminary site evaluation does not produce sufficient information to identify hazards or suspected hazards of the site, an ensemble providing protection equivalent to Level B PPE will be provided as minimum protection. Refer to Attachment C and D for the different Levels of Hazardous Material Spills and Personal Protection Equipment.

Since GM Bedford only has employees responding at the First Responder Operations Level, only Level D personal protective equipment will be required. When outside agencies are called, they will assume responsibilities for their own personal protective equipment.

Spill Response Equipment

The following spill control and cleanup equipment is available at the plant:

A 300 gallon fluid collection system (Scrubber Vac) and tractor with a backhoe are available through the Maintenance Department. Oil absorption material is available in the old A-Crib area located in the southeast section of the Die Cast Building. Spill kits are available at the Fire Brigade Area, the Bulk Storage Area, Wastewater Treatment and the Paint Booth. Additional booms and absorbent pillows are also available at the wastewater treatment plant.

The following is a list of items in the spill kits:

(Paint Booth, Wastewater Treatment Plant, and Bulk Storage Spill Kits)

- 12-3" X 46" HAZ-MAT Socks
- 6-3" X 10' HAZ-MAT Socks
- 2 – 10' Dikes
- 7-16" X 17" Pillows
- 75-Mat Pads
- 10 Temporary Disposal Bags & Ties

(Fire Brigade Area Large Response Cart)

- 14-3" X 46" HAZ-MAT Socks
- 3-3" X 10' HAZ-MAT Socks
- 2 – 10' Dikes
- 7-16" X 17" Pillows
- 2-5 lb. Bags of Pulp
- 100-Mat double-weight Pads

- 15 Temporary Disposal Bags & Ties

Note: Shovels are also available in the area near the Spill Kit.

The following is a list of items on the fire wagon and equipment cart:

- Shovel
- 1 Axes
- City adapter
- Gloves 1 dozen
- 100 ft. rope
- 2 helmets
- Megaphone
- 2 crow bars

The following is a list of the Blood Borne Pathogens supplies and locations of the cabinets:

Locations of cabinets

#1 Die Cast North in the aisle

#2 Pistons by heat treat oven by supervisors desk.

#3 Tool Room hallway by supervisor desk.

#4 Die Cast South behind scale.

#5 Maintenance office wall outside.

#6 Melting going west wall of melting office.

Supplies

- 5 Personal Protective Kits that contain Head covers, masks, gowns, shoe covers, red biohazard bags, paper towels, antiseptic wipes and rubber gloves.
- 5 Small spill kits that contain Red biohazard bags, rubber gloves, antiseptic wipes.
- 5 large spill kits 2 Red biohazard bags, paper towels, antiseptic wipes, many rubber gloves.
- CPR biohazard bags, antiseptic wipes, one-way breathing mask, steril 4X4's and rubber gloves.

Emergency Response Sequence

Security will contact all required personnel in accordance to the internal notification flow chart (Refer to the Internal/External Notification Section) and maintenance personnel will initiate all required immediate response. These responses may include, but are not limited to:

- Activate internal facility alarms and communications systems, where applicable, to notify facility personnel;
- Mobilize the security section or initiate spill response procedures, as necessary;
- Notify appropriate local agencies with designated response roles if their help is needed.

The Spill Response Team must immediately identify the character, source, quantity, and extent of any released materials. The identification may be performed by observation or by review of records, labels, or placards.

Some of the responsibilities of the Spill Response Team are:

Evacuation

The Spill Response Team must assess possible hazards to human health and the environment. If the assessment indicates that the incident could threaten human health and/or the environment within the facility, the Spill Response Team:

- Orders all or portions of facility operations to be halted as required, and
- Orders facility evacuation or partial evacuation as required.

Confinement

Confinement is defined as those procedures taken to keep a material in a specific or local area.

- Land releases should be confined by such methods as diking; blocking sewer openings, drains or ditches; and adsorbing or neutralizing runoff.

Determination of the Size and Source of the Leak

The Spill Response Team must identify the type and location of the leak.

Isolation of the Source of the Leak

It may be possible to isolate the source to better control and lessen the spread of the hazard.

Containment

Containment of a leak is defined as those procedures performed to keep the material in its container(s). Containment is accomplished by overpacking (placing a damaged container into a larger container), plugging, patching, or transferring the material to another container.

EMERGENCY MEDICAL TREATMENT AND FIRST AID

Medical aid is available on-site 24 hrs each work day. A doctor is on-site Monday through Friday for 4 hours.

DECONTAMINATION

As the types of chemical materials used at the Bedford Plant (i.e., resins, oils, acids and caustics) are easily identifiable if spilled and site contamination with an unidentifiable material is unlikely.

At all times during the spill clean up, the incident commander will ensure that provisions are in place to minimize contamination of surrounding material, equipment, floors and property. As a final point in the spill clean up process, floors, pavement, equipment, personal protective equipment, etc., must be disposed of or cleaned properly.

Property

All floors, material, pavement, etc., must be thoroughly cleaned/neutralized to rid the area of contamination and prevent others from contacting the contaminated surface. All materials used for cleaning/neutralizing must be contained and placed in a holding receptacle such as drum for final disposal.

Equipment

All equipment used during the spill clean up must be thoroughly cleaned/neutralized to rid it of contamination and prevent others from contacting the contaminate when it is reused. If any equipment can not be clean/neutralized, the equipment will be placed in a holding receptacle such as a drum for final disposal.

Personal Protective Equipment

As spill clean up personnel leave the spill site and is ready to remove contaminated personal protective equipment not able to be cleaned/neutralized, they will remove contaminated equipment and place into a holding receptacle such as a drum for final disposal.

POST EMERGENCY RESPONSE ACTION

Critique of Emergency Response

At the conclusion of the emergency response, active and advisory personnel involved with the response will discuss the incident. The purpose of this discussion will be to determine possible methods to prevent a future occurrence, positive efforts of the response and response failures which need to be addressed and improved upon.

Waste Disposal

Environmental Engineering will direct proper methods for packaging and disposal of the material, equipment and personal protective equipment.

Spill Response Equipment Inventory

The Engineering Department will ensure provisions are made to inventory the spill response carts and spill supplies. They will initiate steps to restock used materials.

EVACUATION

If it becomes necessary to evacuate the facility, or portion hereof, due to a release of a chemical material, the Disaster Preparedness Plan, will be implemented. The plan designates certain safe areas in which employees are to be assembled.

PERSONAL PROTECTIVE EQUIPMENT LEVEL C

- Air-purifying respirator, full-face, canister-equipped (MSHA/NIOSH approved)
- Chemical-resistant clothing (coverall; hooded, one-piece or two-piece chemical splash suit; chemical -resistant hood and apron; disposable chemical-resistant coveralls)
- Coveralls
- Gloves (outer), chemical-resistant
- Gloves (inner), chemical-resistant
- Boots (outer), chemical-resistant, steel toe and shank
- Hard hat
- Escape mask
- 2-way radio communication

PERSONAL PROTECTIVE EQUIPMENT LEVEL D

- Coveralls
- Gloves
- Boots/shoes or chemical splash goggles
- Hard Hat (face shield)



APPENDIX B.4

BEDFORD FACILITY SEWER SYSTEM LAYOUT

APPENDIX B.5

NPDES PERMIT

cc: Greg Etzel P. Murphy
G Brent M. Mill
D. Williams J. Etzel
J. Ogden

STATE of INDIANA

STREAM POLLUTION CONTROL BOARD

1330 West Michigan Street
P. O. Box 1964

September 25, 1985

RECEIVED
9/27/85
10/28/85

VIA CERTIFIED MAIL

Mr. Glen Ohl, Environmental
Coordinator
General Motors Corporation
Central Foundry Division
Bedford Plant
P.O. Box 271
Bedford, IN 47421

Dear Mr. Ohl:

Re: NPDES Permit No. IN 0003573
Bedford Foundry

Your application for a National Pollutant Discharge Elimination System (NPDES) Permit has been processed in accordance with Sections 402 and 405 of the Federal Water Pollution Control Act as amended by PL 92-500 and PL 95-217 (33 U.S.C. 1251, et seq.), and Public Law 100, Acts of 1972, as amended (IC 13-7, et seq., the "Environmental Management Act"). The enclosed NPDES Permit covers your facility which utilizes aluminum die casting and molding processes and that discharges into the Bailey Branch of Pleasant Run Creek. All discharges from this facility shall be consistent with the terms and conditions of this permit.

One condition which needs to be clearly understood concerns violation of the effluent limitations in the permit. Exceeding the limitations constitutes a violation of the permit and may subject the permittee to criminal or civil penalties. (See Part II A.2.) It is therefore urged that your office and treatment operator understand this part of the permit.

It should be noted that several changes have occurred in the permit since the 30-day public notice period. These changes are itemized on page 24 of the Fact Sheet for your review.

It should also be noted that any appeal must be filed under procedures outlined in 330 IAC 5-16. The appeal must be initiated by filing with the Stream Pollution Control Board a request for an adjudicatory hearing within 30 days of receipt of this letter.

317/633-0838.

Very truly yours,

Earl A. Bohner
Technical Secretary

RAK/bt
Enclosures
cc: Chief, Permit Section U.S. EPA Region V
Lawrence County Health Department

INDIANA STREAM POLLUTION CONTROL BOARD
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended by P.L. 92-500 and P.L. 95-217 (33 U.S.C. 1251 et seq., the "Act"), and Public Law 100, Acts of 1972, as amended (IC 13-7, et seq., the "Environmental Management Act"), GENERAL MOTORS CORPORATION, CENTRAL FOUNDRY DIVISION, is authorized to discharge from a facility which produces aluminum die castings and permanent molded products and is located on North Jackson Street, Bedford, Indiana, to receiving waters named an unnamed tributary to the Bailey Branch of Pleasant Run Creek in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I and II hereof.

The permit shall become effective thirty-five (35) days from the date of signature of the Technical Secretary.

This permit and the authorization to discharge shall expire at midnight August 31, 1990. In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and forms as are required by the Indiana Stream Pollution Control Board no later than 180 days prior to the date of expiration.

Signed this 23 day of September, 1985, for the Indiana Stream Pollution Control Board.

E. A. Bottorff
Technical Secretary

PERMIT EFFECTIVE 10/28/85

TREATMENT FACILITY CLASSIFICATION

The discharger has a Class D industrial wastewater treatment plant, classified in accordance with 320 IAC 3-10.1, Classification of Water and Wastewater Treatment Plants.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning with the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge from outfall(s) 002 (Carbon Column effluent). Such discharge shall be limited and monitored by the permittee as specified below:

Discharge Limitations

Effluent Characteristic	kg/day (lbs/day) Daily Average	kg/day (lbs/day) Daily Maximum	Other Limitations Daily Average	Other Limitations Daily Maximum	Monitoring Requirement Measurement Frequency	Monitoring Requirement Sample Type
Flow (MGD)	--	--	--	--	5 X Weekly	
Total Suspended Solids	--	--	10 mg/l	15 mg/l	3 X Weekly	24-Hr. Comp.
Oil and Grease	--	--	--	10 mg/l	2 X Weekly	Grab
Total Copper	--	--	--	0.06 mg/l	Weekly	24-Hr. Comp.
Total Lead	--	--	--	0.05 mg/l	Weekly	24-Hr. Comp.
Total Zinc	--	--	0.2 mg/l	0.73 mg/l	Weekly	24-Hr. Comp.
Total Phenols (4AAP)	--	--	--	0.1 mg/l	3 X Weekly	24-Hr. Comp.
Total Toxic Organics**	--	--	--	--	Semi-annually	24-Hr. Comp.
Total Residual Chlorine*	(Monitor for a period of 6 months)				2 X Monthly	Grab
Polychlorinated Biphenyls	--	--	--	0.001 mg/l	3 X Weekly	24-Hr. Comp.
Ammonia (as N)*	(Monitor for a period of 3 months)				Weekly	24-Hr. Comp.
$TBOD_5$	--	--	--	10 mg/l	3 X Weekly	24-Hr. Comp.
1,1,1-Trichloroethane*	(Monitor for a period of 3 months)				2 X Monthly	24-Hr. Comp.
Tetrachloroethylene*	(Monitor for a period of 3 months)				2 X Monthly	24-Hr. Comp.

Water treatment additives in use have been reviewed and do not appear to contain toxic materials in significant amounts. In the event that changes are to be made in the use of water treatment additives contributing to outfall 002, then the Permittee shall notify the Indiana Stream Pollution Control Board as required by Part II of this permit.

This monitoring should be for the period detailed in the table.

*The above noted parameter(s) are to be monitored to determine [illegible] the end of this sampling period, the permittee may request, in writing, a review of these requirements. Upon review by the ISPCB, monitoring requirements may be deleted, if appropriate, without public notice or opportunity of hearing. Alternatively, the permit may be modified, after public notice and opportunity for hearing, to include appropriate effluent limitations.

**Toxic Organic Pollutant Monitoring. For one year beginning on the effective date of this permit, the permittee shall complete a semi-annual monitoring program (2 sampling events) at the treatment plant effluent for the purpose of further characterizing the discharge of toxic organic pollutants. The following shall be specifically analyzed for:

Priority Pollutant No.	Chemical Name
011	1,1,1-Trichloroethane
085	Tetrachloroethylene

Additional specific pollutants may be added to the above list by the (State Agency) based upon information provided by the toxic organic pollutant management plan as required by Part I.D. of this Permit. At least two grab samples for volatile pollutants and either an 8-hour or a 24-hour composite sample for acid and base/neutral pollutants shall be obtained on each monitoring day. Wastewater samples shall be prepared and analyzed by GC-MS in accordance with U.S. EPA approved methods 624 and 625. In addition to the quantitative analysis for the priority pollutants, a reasonable attempt shall be made to identify and quantify any additional substances indicated to be present in the extracts by peaks on the reconstructed gas chromatograms (total ion plots) more than 10 times higher than the adjacent peak-to-peak background noise. Identification shall be by reference to the EPA/NIH computerized library of mass spectra, with visual confirmation by an experienced analyst. Quantification may be an order-of-magnitude estimate based upon comparison with an internal standard.

After review of the results of the toxic organic pollutant monitoring program, the (State Agency) may propose effluent limitations for specific toxic organic pollutants, or continue or modify the monitoring program as appropriate.

a. The pH shall not be less than 6 nor greater than 9. The pH shall be monitored as follows: by a 5 X weekly grab sample.

b. The discharge shall not cause excessive foam in the receiving waters. The discharge shall be essentially free of floating and settleable solids.

c. The discharge shall not contain oil or other substances in amounts sufficient to create a visible film or sheen on the receiving waters.

d. Samples taken in compliance with the monitoring requirements above shall be taken at a point representative of the discharge but prior to entry into an unnamed tributary to the Bailey Branch of Pleasant Run Creek.

2. During the period beginning on the effective date of this permit and lasting until expiration, the permittee is authorized to discharge from outfall(s) 003 (Overflow from stormwater retention lagoon). Such discharge shall be limited and monitored by the permittee as specified below:

Discharge Limitations

Effluent Characteristic	kg/day (lbs/day) Daily Average	Daily Maximum	Other Limitations Daily Average	Daily Maximum	Monitoring Requirement Measurement Frequency	Sample Type
Flow (MGD)*	--	--	--	--	Measure when sampling	
Oil and Grease**	--	--	--	--	Weekly	Grab
Polychlorinated Biphenyls	--	--	--	--	Daily	24-Hr. Comp.

The permittee is required to provide the ISPCB within 30 days from the effective date of this permit the pumping rate or draw down rate at which the contents of the storm lagoon are fed into the biological treatment system. The storm lagoon is to be drawn down at a yet to be established rate continuously whenever precipitation reduces the reserve capacity below the 15-year, 24-hour storm volume.

*The permittee shall act to maintain a reserve capacity in the stormwater retention lagoon greater than or equal to that sufficient to contain a 15-year, 24-hour storm event on the lagoon and contributing areas. Dry weather discharge is prohibited. Discharge from Outfall 003 is permitted only when a severe storm event or combination of storm events results in an overflow of the retention lagoon despite the permittee's efforts to maintain the storage capacity as noted. In the event of an overflow, the permittee shall monitor the discharge as noted above.

**If oil and grease is measured in the effluent in detectable quantities, the source of such discharge is to be investigated and eliminated if feasible, and the findings reported to the Indiana Stream Pollution Control Board. Samples shall be taken within fifteen minutes from the commencement of the overflow unless an underflow discharge pipe is used.

a. The pH shall not be less than 6 nor greater than 9. The pH shall be monitored as follows: by a weekly grab sample.

b. The discharge shall not cause excessive foam in the receiving waters. The discharge shall be essentially free of floating and settleable solids.

c. The discharge shall not contain oil or other substances in amounts sufficient to create a visible film or sheen on the receiving waters.

d. Samples taken in compliance with the monitoring requirements above shall be taken at a point representative of the discharge but prior to entry into an unnamed tributary to the Bailey Branch of Pleasant Run Creek.

P. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

The permittee shall submit monitoring reports (DMR-1 Form) to the Indiana Stream Pollution Control Board containing results obtained during the previous month and shall be postmarked no later than the 28th day of the month following each completed monitoring period. The first report shall be submitted by the 28th day of the month following the month in which the permit becomes effective.

If there is to occur a substantial period of time during which there will be no discharge from an authorized outfall, then the permittee may submit a written request to the Indiana Stream Pollution Control Board for relief from reporting requirements. The Indiana Stream Pollution Control Board may then suspend reporting requirements without public notice or opportunity for public hearing.

The Regional Administrator may request the permittee to submit monitoring reports to the Environmental Protection Agency if it is deemed necessary to assure compliance of the permit.

3. Definitions

a. Daily Average

(1) Weight Basis - The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was discharging. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.

(2) Concentration Basis - The "daily average" concentration means the arithmetic average (proportional to flow) of all daily determinations of concentration made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily determination of concentration shall be the arithmetic average (weighted by flow value) of all the samples collected during the calendar day.

b. "Daily Maximum" Discharge

(1) Weight Basis - The "daily maximum" discharge means the total discharge by weight during any calendar day.

(2) Concentration Basis - The "daily maximum" concentration means the daily determination of concentration for any calendar day.

c. 24-Hour Composite Sample--Consists of at least four individual flow-proportional samples of wastewater which are taken at approximately equally spaced time intervals during a 24-hour period and which are combined prior to analyses.

d. Concentration--The weight of any given material present in a unit volume of liquid. Unless otherwise indicated in this permit, concentration values shall be expressed in milligrams per liter (mg/l).

e. The Regional Administrator is defined as the Region V Administrator, U.S. EPA, located at 230 South Dearborn Street, Chicago, Illinois 60604.

f. The Indiana Stream Pollution Control Board is located at the following address: 1330 West Michigan Street, Indianapolis, Indiana 46206.

4. Test Procedures

Test procedures for analysis of pollutants shall conform to regulations published pursuant to Section 304(h) of the Act, the most recent edition of "Standard Methods for the Examination of Water and Wastewater," or other methods approved by the Indiana Stream Pollution Control Board, under which such procedures may be required.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

a. The exact place, date, and time of sampling;

b. The dates the analyses were performed;

c. The person(s) who performed the analyses;

d. The analytical techniques or methods used; and

e. The results of all required analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Indiana Stream Pollution Control Board Monthly Monitoring Report. Such increased frequency shall also be indicated.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years, or longer, if requested by the Regional Administrator or the Indiana Stream Pollution Control Board.

C. REOPENING CLAUSE

This permit shall be modified, or, alternatively, revoked and reissued, to comply with any applicable effluent limitation or standard issued or approved under section 301(b)(2)(C), (D) and (E), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent limitation or standard so issued or approved:

(1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

(2) controls any pollutant not limited in the permit.

D. TOXIC ORGANIC POLLUTANT MANAGEMENT PLAN

The Permittee is required to submit a management plan for toxic organic pollutants. This document is to be submitted to the Indiana Stream Pollution Control Board within 90 days of the date of issuance of this permit, and is to include a listing of the toxic organic compounds used, including petroleum based oils and coatings in use, the method of disposal, and procedures for ensuring that these compounds do not routinely spill or leak into the process wastewaters, noncontact cooling water, groundwater, stormwater or other surface waters. Upon review and approval of the plan, the ISPCB may modify this permit to include the plans as a provision of the permit. Additional specific pollutants may be added to the Discharge Limitations upon information provided by the above report and or the TTO monitoring program.

PART II
STANDARD CONDITIONS FOR NPDES PERMITS
FOR INDUSTRIAL FACILITIES

SECTION A. GENERAL CONDITIONS

1. Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and the Indiana Environmental Management Act and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

2. Penalties for Violations of Permit Conditions

Pursuant to the Indiana Environmental Management Act, any person who violates a permit condition implementing sections 301, 302, 306, 307, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $25,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing sections 301, 302, 306, 307, or 308 of the Clean Water Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than 1 year or both. If the conviction is for a violation committed after a first conviction of such person under this provision, punishment shall be a fine of not more than fifty thousand dollars ($50,000) per day of violation, or by imprisonment for not more than two (2) years, or both.

Except as provided in permit conditions on "Bypassing," Section B, Paragraph 2 and "Upsets," Section B, Paragraph 3, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with the permit.

4. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause, including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of (i) a request by the permittee for a permit [illegible] changes or anticipated noncompliance does not stay any permit condition.

5. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

6. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

7. Transfers

This permit is nontransferable to any person except after notice to the Director pursuant to Regulation 330 IAC 5-2-5(c). The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

8. Toxic Pollutants

Notwithstanding Paragraph A-4, above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition.

The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants injurious to human health within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

9. Containment Facilities

When cyanide or cyanogen compounds are used in any of the processes at this facility, the permittee shall provide approved facilities for the containment of any losses of these compounds in accordance with the requirements of Stream Pollution Control Board Regulation 330 IAC 1-2.

10. Operator Certification

The permittee shall have the waste treatment facilities under the direct supervision of an operator certified by the Environmental Management Board as required by IC 13-1-6.

11. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

12. Property Rights

The issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or an invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

13. Severability

The provisions of this permit are severable and, if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

14. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

15. Construction Permit

The permittee shall not construct, install, or modify any water pollution control facility without a valid construction permit issued by the Indiana Stream Pollution Control Board pursuant to 330 IAC 3.1.

SECTION B. MANAGEMENT REQUIREMENTS

1. Proper Operation and Maintenance

The permittee shall at all times maintain in good working order and efficiently operate all facilities and systems for wastewater collection and treatment which are installed or used by the permittee and which are necessary for achieving compliance with the terms and conditions of this permit.

2. Bypass of Treatment Facilities

a. Definitions:

(1) "Bypass" means the intentional diversion of a waste stream from any portion of a treatment facility normally utilized for treatment of the waste stream.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production at the permittee's facility.

b. (Prohibition of Bypass) Bypass which causes or is likely to cause applicable effluent limitations to be exceeded is prohibited unless the following three conditions are met:

(1) Bypass is unavoidable to prevent loss of life, personal injury or severe property damage;

(2) There are no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal period of equipment down-time; and

(3) The permittee submits notice of an unanticipated bypass to the Director within 24 hours of becoming aware of the bypass (if this information is provided orally, a written submission must be provided within five days). Where the permittee knows or should have known in advance of the need for a bypass, this prior notification shall be submitted for approval to the Director, if possible, at least ten days before the date of the bypass.

c. An anticipated bypass which meets the three criteria of Paragraph b of this subsection may be allowed under conditions determined to be necessary by the Director to minimize any adverse effects.

3. Upset Conditions

a. Definition: "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. (Effect of an upset) An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Paragraph c of this subsection are met.

c. (Conditions necessary for a demonstration of upset) A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, that:

(1) An upset occurred and the permittee has identified the specific cause(s) of the upset, if possible;

(2) The permitted facility was at the time being operated in compliance with proper operation and maintenance procedures; and

(3) The permittee complied with any remedial measures required under Paragraph A.3 of this Part.

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed from or resulting from treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters and to be in compliance with all Indiana statutes and regulations relative to liquid and/or solid waste disposal.

SECTION C. REPORTING REQUIREMENTS

1. Planned Changes in Facility or Discharge

Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new NPDES application or, if such changes will not violate the effluent limitations specified in this permit, by advance notice to the permit issuing authority of such changes. Following such notice, the permit may be modified to revise existing pollutant limitations and/or to specify and limit any pollutants not previously limited.

Monitoring results shall be reported at the intervals and in the form specified in Part I.B.2.

3. Compliance Schedules

Reports of compliance or noncompliance with interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

4. Twenty-Four Hour Reporting

The permittee shall report information on the following types of noncompliance within 24 hours from the time permittee becomes aware of such noncompliance:

a. Any unanticipated bypass which exceeds any effluent limitation in the permit;

b. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours; and

c. Any noncompliance which may pose a significant danger to human health or the environment.

A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and steps taken or planned to reduce and eliminate the noncompliance and prevent its recurrence. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

5. Other Noncompliance

The permittee shall report any instance of noncompliance not reported under Paragraph 3 or 4 of this Section at the time the pertinent Discharge Monitoring Report is submitted. The report shall contain the information specified in Paragraph 4 of this Section.

6. Other Information

Where the permittee becomes aware that he failed to submit any relevant facts or submitted incorrect information in a permit application or in any report to the Director, the permittee shall promptly submit such facts or corrected information.

7. Changes in Discharge of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

a. That any activity has occurred or will occur which would result in the discharge of any pollutant identified as toxic, pursuant to Section 307(a) of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

(1) One hundred micrograms per liter (100 ug/l);

(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

(3) Five (5) times the maximum concentration value reported for that pollutant in the permit application; or

(4) The level established in Part III of the permit by the Director.

b. That it has begun or expects to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

8. Signatory Requirements

a. All reports required by the permit and other information requested by the Director shall be signed and certified by a person described below or by a duly authorized representative of that person:

(1) For a corporation: by a principal executive officer of at least the level of vice-president (including a person who is not a vice-president but performs similar policy-making functions for the corporation);

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a Federal, State, or local governmental body or an agency or political subdivision thereof: by either a principal executive officer or ranking elected official.

b. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above.

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of

of position or equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

(3) The authorization is submitted to the Director.

c. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

9. Availability of Reports

Except for data determined to be confidential under Board Regulation 330 IAC 5-1.5, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Indiana Stream Pollution Control Board and the Regional Administrator. As required by the Clean Water Act, permit applications, permits, and effluent data shall not be considered confidential.

10. Penalties for Falsification of Reports

The Indiana Environmental Management Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

RAK
WPC 14wwI
9/19/85

(NPDES) PERMIT PROGRAM

FACT SHEET
for
A Draft NPDES Permit to Discharge into Waters of the State
Proposed to be Issued by the:

Indiana Stream Pollution Control Board
1330 West Michigan Street
Indianapolis, IN 46206

Public Notice No.:

Public Notice Issued on:

Name and Address of Applicant:

General Motors Corporation
Central Foundry Division
P.O. Box 271
Bedford, IN 47421

Name and Address of Facility where Discharge Occurs:

General Motors Corporation
Central Foundry Division
North Jackson Street
Bedford, IN 47421

Receiving Water: The Bailey Branch of Pleasant Run Creek via an unnamed ditch.

Use Classification: The receiving water is classified for partial-body contact recreation and aquatic life.

I. Tentative Decision on the Application

The above-named applicant has applied for an NPDES permit to discharge wastewaters into the above-described receiving water. The NPDES permit program is administered by the Indiana Stream Pollution Control Board ("Board") pursuant to Sec. 402(b) of the Federal Clean Water Act, as amended, the Indiana Environmental Management Act, as amended (IC 13-7), and Board Rule 330 IAC 5. The Technical Secretary of the Board has examined the application and has developed a draft permit which is proposed to be issued subject to concurrence of the U.S. Environmental Protection Agency. Principal provisions of the draft permit, including effluent limitations, and other pertinent information, are outlined below.

II. Location of Discharge

A description and/or sketch of the location of the discharge is appended as Attachment I.

III. Description of Existing Discharge

A quantitative description of the existing discharge in terms of significant effluent parameters is appended as Attachment II.

IV. Description of Effluent Limitations and Effluent Limitations Rationale

A. The effluent limitations in the draft permit as well as monitoring requirements, schedule of compliance, and special conditions are described in Attachment III. Also included is an effluent limitations rationale which provides the basis for each limitation or condition.

B. The other special conditions in the proposed permit may include, but are not necessarily limited to: monitoring, recording, and reporting discharges; limiting discharges of oil, hazardous substances, collected solids, visible floating solids, foams, and effluent batch discharges; planning for electric power failure and spill prevention and containment; and prohibiting bypass of treatment facilities. Persons wishing further information about the special conditions may contact the Indiana Stream Pollution Control Board.

V. Procedures for the Formulation of Final Determination

A. Interested persons are invited to submit written comments upon the proposed discharge. Comments should be submitted in person or by mail no later than 30 days after the date of the public notice was issued for the permit application. Deliver or mail all comments to:

Mrs. Julie Bright
Division of Water Pollution Control
Permits Section
Indiana State Board of Health
1330 West Michigan Street
Indianapolis, IN 46206

The application and public notice numbers should appear next to the above address on the envelope and on each page of any submitted comments. All comments received no later than 30 days after the public notice is issued will be considered in the formulation of final determinations. The Indiana Stream Pollution Control Board will issue final determinations in a timely manner after the expiration of the public comment period.

B. If written comments indicate a significant public interest in the application, the Technical Secretary of the Indiana Stream Pollution Control Board shall hold a public hearing on the application. If held, the public hearing will be designed to collect relevant information pertaining to the application in an orderly and expeditious manner. Public notice of a public hearing will be circulated at least 30 days in advance of such event. The public hearing will be held within the State of Indiana. After the public hearing, the Technical Secretary of the Indiana Stream Pollution Control Board will formulate his final determination. Further information regarding the conduct and nature of the public hearings concerning discharge

Pollution Control Board.

Requests for a public hearing should: state the name and address of the person requesting the hearing and of any person represented at the hearing by the requester; identify the interest in the proposed permit of the requester and of any person represented by him; state the reasons for the request; state the issues proposed to be considered at the hearing; and state the position of the requester on the issues to be considered at the hearing.

VI. Staff Contact and Availability of Information

Additional information concerning the draft permit or permit issuance procedures may be obtained between the hours of 8:15 a.m. and 4:45 p.m., Monday through Friday from:

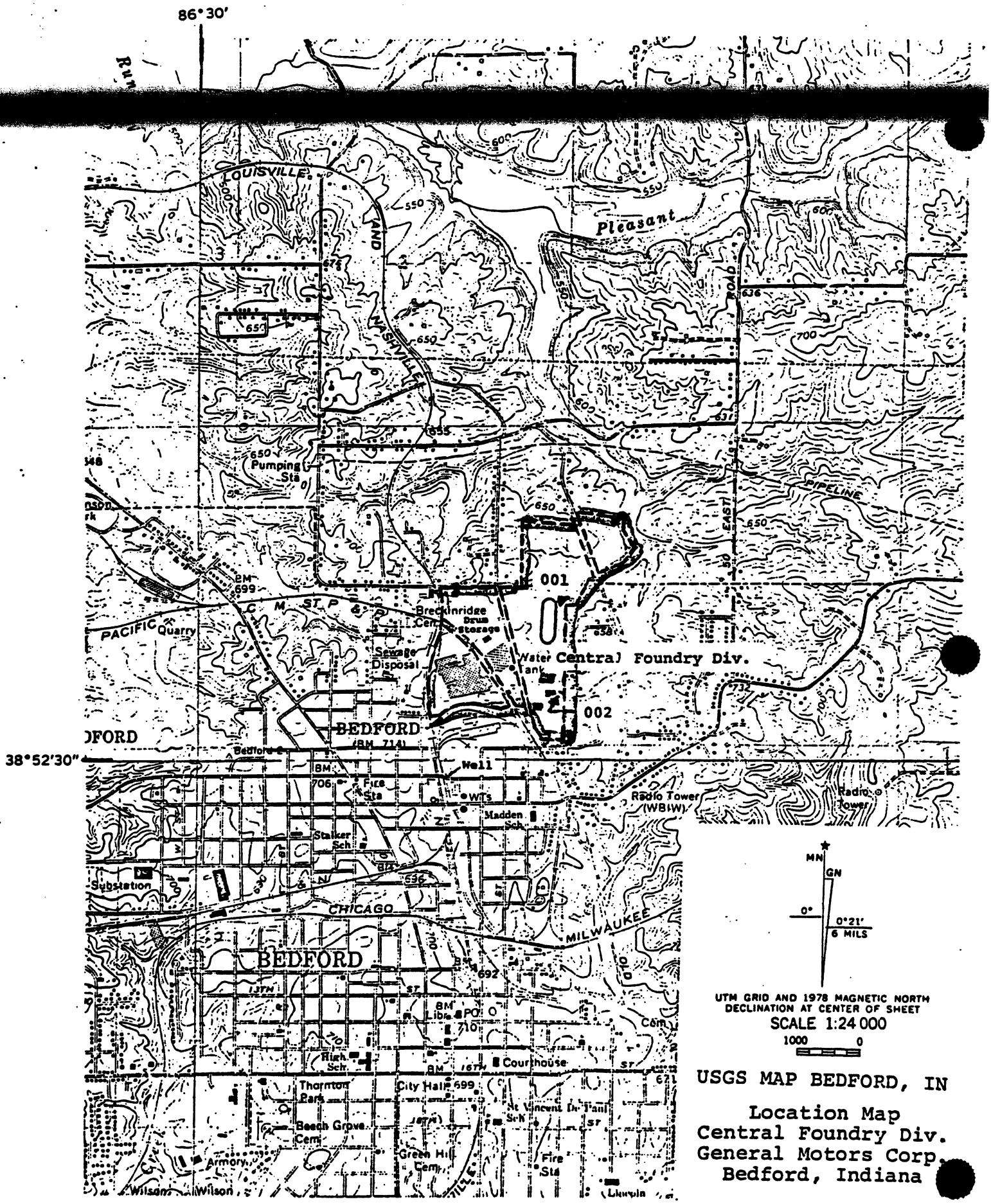
Mr. Robert A. Kelsey at AC 317/633-0838

Copies of the application, proposed permit including proposed effluent limitations, special conditions, comments received, and other documents are available for inspection and may be copied at a cost of 15 cents per page at the Indiana State Board of Health, Room 336, 1330 West Michigan Street, Indianapolis, Indiana.

Attachment I

Location of Discharge

See the attached topographic map of GMC-Central Foundry Division for each specific outfall location.



UTM GRID AND 1978 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

1000 0

USGS MAP BEDFORD, IN

Location Map
Central Foundry Div.
General Motors Corp.
Bedford, Indiana

Attachment II

Description of Existing Discharge

General

The applicant operates an aluminum casting foundry in Bedford, Indiana. Discharges at this facility are authorized by NPDES Permit No. IN 0003575 which expired April 1, 1978, and which is at this time being renewed. A five-year renewal permit and a short-term renewal permit were proposed for issuance in 1981 and 1982, respectively. Due to a PCB problem that resulted in several Consent Orders requiring construction of additional treatment facilities and increased effluent sampling requirements, coupled with a delay, among others, in publication of Effluent Limitations Guidelines for the Foundry Category, have prevented further processing of a renewal permit until now.

Type of Industry

Operations from this facility are listed under SIC Code 3361 for an aluminum foundry for the production of automobile transmission casings, pistons, intake manifolds, and engine blocks utilizing aluminum die castings and permanent molding processes.

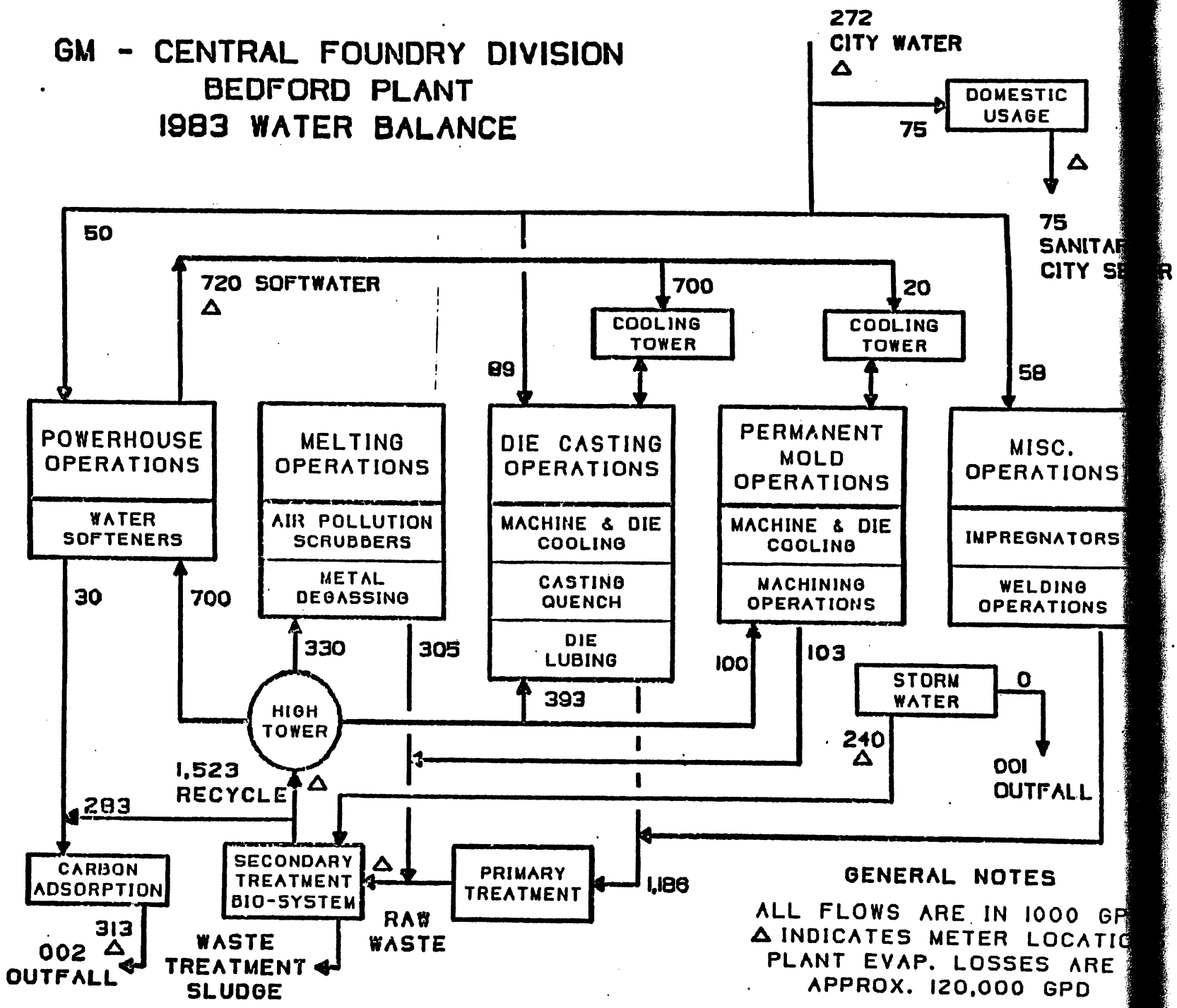
Intake Water and Wastewater Treatment

The City of Bedford provides the applicant with water which is used as process and sanitary make-up water. Contaminated stormwater runoff is collected and recycled and comprises the largest share of makeup water for process operations. (See the attached 1983 water balance sheet for Central Foundry.)

Treated wastewater originating from aluminum die casting, permanent molding processes, and contaminated stormwater runoff are discharged through outfall 002. The process wastewater specifically arises from air scrubbers and the cooling of dies and castings. Sanitary wastewater discharges to the city sewer for treatment at the publicly operated treatment works (POTW).

Prior to 1972, the hydraulic fluid used in machinery at the Bedford foundry contained PCBs (polychlorinated biphenyls). Since 1972 all new hydraulic fluid purchased by Central Foundry has been PCB-free, but the prior use of PCBs has contaminated the facility so that measurable concentrations of PCBs are still found in its wastewater and storm water runoff. As a result of this discharge of PCBs, several Notices of Hearing before the Indiana

GM - CENTRAL FOUNDRY DIVISION
BEDFORD PLANT
1983 WATER BALANCE



Stream Pollution Control Board were issued on April 26, 1977 and July 7, 1981. Negotiations resulted in a Stipulation and Consent Orders (Cause Numbers B-416 and B-802) dated October 21, 1980 and March 15, 1983, respectively.

In the original treatment system, noncontact cooling water and stormwater were discharged from a lagoon via Outfall 001. Process wastewaters were partially recycled and then discharged in common with some stormwater and spring water (which until recently flowed across a certain section of the permittee's property) through Outfall 002. To comply with the Consent Order (Cause No. B-416) of October 21, 1980, Central Foundry did the following: (1) expanded their recycle system; (2) rerouted the noncontact cooling water to the recycle system; (3) constructed the 25-year, 24-hour stormwater retention lagoon; and (4) constructed a collection system to route runoff from improved areas, if any, to the new retention lagoon. Central Foundry treats the stormwater from the new lagoon by routing it to either the recycle system or the carbon adsorption column for discharge. There is only carbon column effluent discharging from Outfall 002 while a discharge from 001, consisting solely of stormwater, will occur only when there is a storm event (or combination of storm events) thereby reducing the reserve capacity of the lagoon to less than that needed to hold the volume of runoff caused by the 15-year, 24-hour storm event.

Any uncontaminated spring water that surfaces intermittently onto the permittee's property or flows onto it from a subsurface conduit shall be conveyed to their natural point of exit. If the spring water is contaminated it shall be routed through the permittee's treatment system.

The Consent Orders contained other items, such as a requirement for a stream study, which has not been included here. The NPDES permit will in no way supersede the Consent Orders, but, instead will exist as a separate document with requirements which coincide with and supplement the pertinent items of the Consent Orders.

At the present time, the existing 3.0 mgd process recycle treatment system consists of primary treatment having oil separation and flow equalization. The secondary and advanced wastewater treatment facilities includes aerobic digestion, coagulation, flocculation, clarification, disinfection, filtration, and carbon adsorption. In addition, sludge thickeners and a plate filter press are used to dewater sludge from secondary treatment while heat treatment and a centrifuge system are used for

[redacted] operations are disposed of in a sanitary landfill. See the attached Wastewater Treatment System Schematic that follows.

Receiving Stream

The receiving stream for both Outfalls 001 and 002 is an unnamed ditch tributary to the Bailey Branch of Pleasant Run Creek. The discharges (001 and 002) enter the unnamed ditch at different locations and eventually combine together outside the permittee's property. Pleasant Run Creek is tributary to Salt Creek. Salt Creek is tributary to the East Fork of the White River. The City of Bedford also has an intermittent water intake on Salt Creek downstream of Pleasant Run Creek. The seven-day, ten-year low flow of the Bailey Branch of Pleasant Run Creek is assumed to be 0 cfs.

A description of the existing discharges (for the period of July 1983 to June 1984) obtained from discharge monthly reports (DMR's) for Outfalls 001 and 002 follows:

Outfall 001

Effluent Parameter	Average mg/1	Maximum mg/1
Flow (MGD)	(No flows reported during this period)	
BOD_5		
Oil and Grease		
Total Suspended Solids		
PCB's		
pH units		

Outfall 002

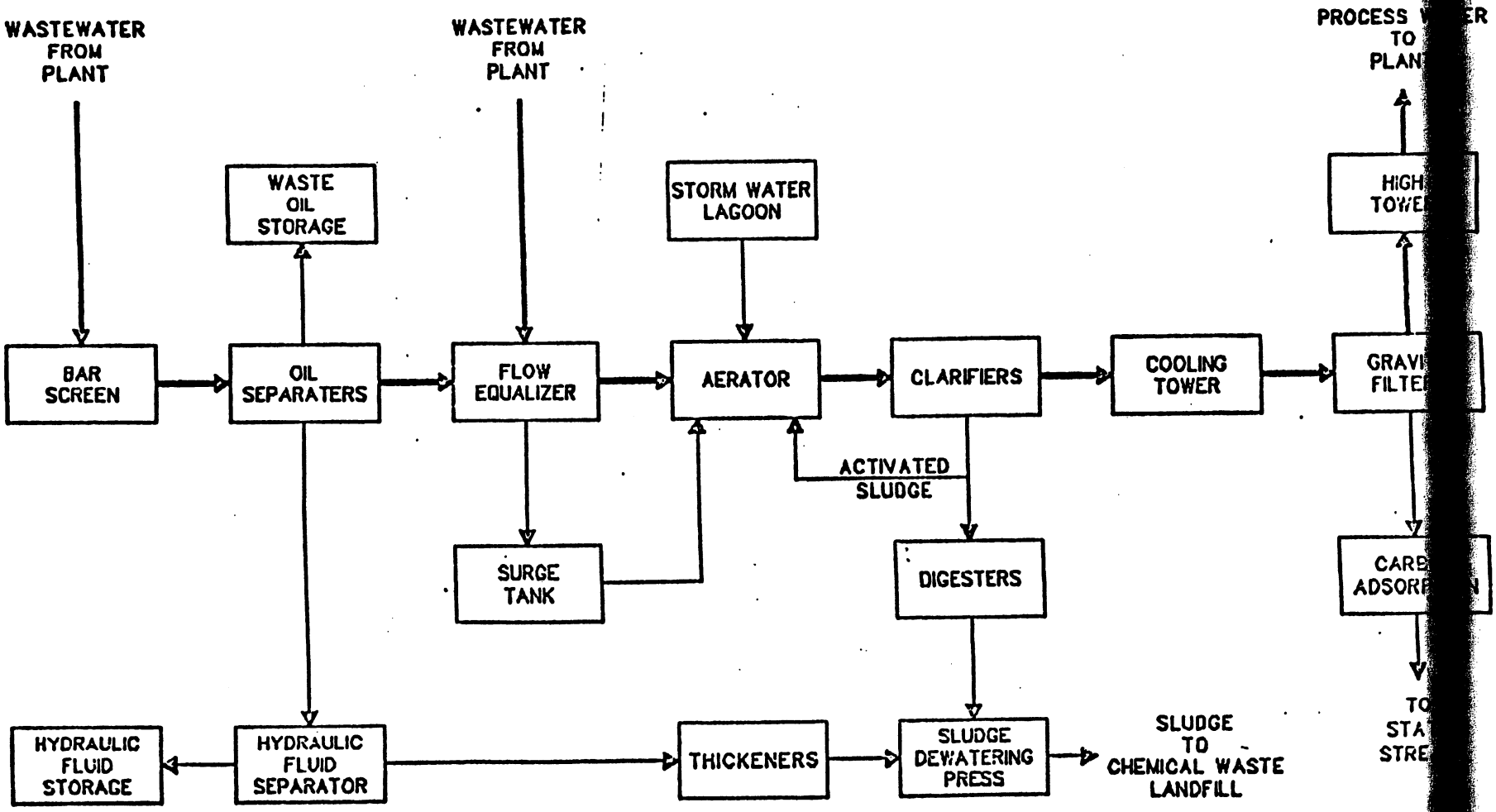
Effluent Parameter	Average mg/1	Maximum mg/1
Flow (MGD)	(0.353)	(0.5)
BOD_5	6.3	114
Oil and Grease	4.0	10
Total Suspended Solids	3.2	11.8
PCB's	(less than 1.0 ug/1)	(6.5 ug/1)
pH units	(7.2 s.u.)	(8.2 s.u.)

A further description of Outfall 002 representing data submitted with the permittee's 2c renewal application follows:

Outfall 002

Effluent Parameter	D. Maximum mg/l	No. of Analysis
Ammonia (as N)	8.3	1
T. Aluminum	0.12	1
T. Copper	less than 0.01	1
T. Lead	less than 0.1	1
T. Phenols	3.50	1
T. Zinc	less than 0.10	1
Tetrachloroethylene	6.20	1
1,1,1-Trichloroethane	0.09	1

BIOLOGICAL WASTEWATER TREATMENT SYSTEM



Permit No. IN. 0003573

Attachment III

Description of Effluent Limitations and Effluent Limitations Rationale

Outfall 001 (Overflow from Stormwater Retention Lagoon)

Effluent Parameter	Discharge Limitations Daily Average	Daily Maximum	Monitoring Requirements Frequency	Type
Flow (MGD)*	--	--	Measure when sampling	
Oil and Grease	--	--	Weekly when discharging	Grab
Polychlorinated Biphenyls	--	--	Daily when discharging	24-Hr. Com
pH units	(limited between 6 and 9)		Weekly when discharging	Grab

*The permittee shall act to maintain a reserve capacity in the stormwater retention lagoon greater than or equal to that sufficient to contain a 15-year, 24-hour storm event on the lagoon and contributing areas. Discharge from Outfall 001 is permitted only when a severe storm event or combination of storm events results in an overflow of the retention lagoon despite the permittee's efforts to maintain the storage capacity as noted. In the event of an overflow, the permittee shall monitor the discharge as noted above.

Oil and Grease

If detectable levels of oil and grease are present in this nonprocess related effluent the source of such discharge is to be investigated and eliminated, if feasible, and the findings reported to the Indiana Stream Pollution Control Board (ISPCB).

Polychlorinated Biphenyls

These requirements are the direct result of a Consent Order (Cause No. B-416) agreed to between the permittee and the ISPCB for the State of Indiana.

pH

According to ISPCB regulation 330 IAC 1-1, no pH values below 6 nor above 9 shall be allowed.

Effluent Parameter	Discharge Limitations lbs/day (mg/l) Daily Average	Daily Maximum	Monitoring Requirements Frequency	Type
Flow (MGD)	--	--	5 X Weekly	24-Hr. Total
Total Suspended Solids	(10)	(15)	3 X Weekly	24-Hr. Comp.
Oil and Grease	--	(10)	2 X Weekly	Grab
Total Copper	--	(0.06)	Weekly	24-Hr. Comp.
Total Lead	--	(0.05)	Weekly	24-Hr. Comp.
Total Zinc	--	(0.73)	Weekly	24-Hr. Comp.
Total Phenols (4AAP)	--	(0.1)	3 X Weekly	24-Hr. Comp.
Total Residual Chlorine	(0.2)	(0.5)	2 X Weekly	Grab
Ammonia (as N)	--	--	Weekly	24-Hr. Comp.
$TBOD_5$	--	(10)	3 X Weekly	24-Hr. Comp.
Polychlorinated Biphenyls	--	(0.001)	3 X Weekly	24-Hr. Comp.
Total Toxic Organics	--	--	Semi-Annually	24-Hr. Comp.
1,1,1-Trichloroethane	--	--	2 X Monthly	24-Hr. Comp.
Tetrachloroethylene	--	--	2 X Monthly	24-Hr. Comp.
pH Units	(limited to a range between 6 and 9)		5 X Weekly	Grab

TSS, Oil and Grease, and Metals (Copper, Lead, and Zinc)

Two separate sets of effluent limitations (primary and secondary) for these parameters were planned to be proposed in the permit. Company representatives provided production data that showed that the production level for the high month for the last twelve months to be 16.3×10^6 pounds (or 388 T/D, as shown on page 17, for an average 21-day production month) of aluminum cast. However, Company representatives also made a plausible argument that production is expected to reach the 27.258×10^6 pounds per month production level within the duration of the permit. In some cases, such as with the automotive industry, historical data may show large random or cyclic fluctuations in production rates, of either a short or long term nature. In those situations, it may be appropriate to have alternate limits which are applicable at some increased production rate or setting the limit based upon a level of production higher than the average. See page 18 of this document for more specifics.

After calculating separate or alternate limitations based on historical and projected production levels, a significant differential did not exist based upon the February 15, 1985, Notice of Availability for the Metal Molding and Casting Industry Point Source Category Effluent Limitations Guidelines Document (40 CFR Part 464). Therefore, alternate limits are not being proposed at this time. Instead, one set of effluent limitations are proposed. Mass limitations are based on the production level of 24.45×10^6 pounds of aluminum produced per month. This amount also represents that level which would have been the monthly production level upon which alternate (or secondary) limits would have been based.

As described on page 18, alternate or secondary limits were not calculated precisely on the projected level of 27.258×10^6 pounds of aluminum cast. Staff believe that a reasonable measure of production is represented by the projected level of 24.45×10^6 pounds of aluminum cast per month. This level should provide for a certain amount of production increase above the historical value of 16.3×10^6 pounds of aluminum cast while still conforming to EPA guidance documents for alternate limitations calculations.

Data sheets representing the initial rationale and calculation of primary and secondary limits are attached for the record starting on Page 18.

Mass limitations for TSS and Oil and Grease based on BPT requirements are not being proposed. Instead, concentration limitations are being proposed that provide the permittee with an allowance for treating plant contaminated stormwater runoff. The bottom of Page 22 indicates calculated Federal Effluent BPT limitations which do not include an allowance for stormwater runoff or nonscope flows which are intended to be dealt with on a case-by-case basis. The concentration based limitations provide the permittee with a continuous allowance since this is usually the case due to the existance of the 25-year, 24-hour storm lagoon. Staff feel the proposed limitations are protective of the receiving stream while not being overly restrictive. TSS and Oil and Grease limitations are the same as in the expiring permit.

Concentration based limitations are proposed to meet water quality requirements for T. Copper and T. Zinc based upon EPA Acute Toxicity Criteria and a water hardness level of 270 mg/l as $CaCO_3$. The following EPA formulas were used to calculate those limitations.

Maximum Acute Copper Toxicity concentration with a specified hardness level (as $CaCO_3$) is represented by the formula:

$$e^{(0.94 \ln (\text{Hardness}) - 1.23)} = \text{ug/l}$$

Maximum Acute Zinc Toxicity concentration with a specified hardness level (as $CaCO_3$) is represented by the formula:

$$e^{(0.83 \ln (\text{Hardness}) + 1.95)} = \text{ug/l}$$

Limitations for T. Lead and T. Phenols are based upon U.S.P.H.S. Drinking Water Standards and Water Quality considerations, respectively. Total Phenols were not specifically listed in the previously cited Notice of Availability but due to past water quality violations at the plant and the potential for stream degradation, effluent limitations for T. Phenols are proposed. Staff believe the final regulations will include T. Phenols limitations.

the calculated BAT mass limitations using both the average daily flow (0.353 mgd) and the maximum flow (0.5 mgd) reported to determine the corresponding concentrations. These concentrations were then compared with the previously mentioned EPA Acute Toxicity information, U.S.P.H.S. Drinking Water Standards, and Water Quality Standards to determine the more protective stream requirements.

TBOD$_5$

The expiring permit limited BOD$_5$ to a daily maximum limitation of 10 mg/l. Based upon water quality considerations and the fact that there is presently an enforcement action for past BOD$_5$ violations the expiring permit limitations are being retained for the duration of the renewal permit.

Ammonia

Monitoring for a three-month period is proposed to determine whether or not significant levels are present. The permit may be modified to include appropriate effluent limitations. Monitoring is being required due to elevated levels, as reported in their 2C application, and because of ammonia's oxygen demand and toxicity to aquatic organisms.

Polychlorinated Biphenyls

This limitation has been placed on Outfall 002 as a result of a Consent Order (Cause No. B-416) agreed to by the permittee and the ISPCB for the State of Indiana due to the carcinogenic properties of PCB's. Contaminated areas resulted from past uses of hydraulic fluid containing PCB's.

Total Residual Chlorine (TRC)

Limitations on TRC have been required to prevent excessive quantities of this disinfectant/biocide from being discharged into the receiving stream to protect the aquatic life. These limitations are the same requirements as those issued under the Steam Electric Power Generating Point Source Category (40 CFR Part 125 and 423) promulgated November 19, 1982.

Total Toxic Organics (TTO) Monitoring

As a result of a June 14, 1985, bioassay, conducted on the plant effluent which showed that significant toxicity exists and to further characterize the discharge in order that those pollutants that need to be controlled, are controlled, semi-annual monitoring for a period of one-year is required. This one-year period should allow the permittee the time to correct the deficiencies that now exist in the treatment system while providing the necessary supporting data for whether or not continued monitoring is required, or for imposing effluent limitations for specific parameters.

In addition to the organics monitoring mentioned above, 1,1,1-trichloroethane and Tetrachloroethylene were found in the effluent as reported in the permittee's 2C renewal application. Monitoring for a period of three months is required to determine whether or not these concentrations found are representative of the discharge or are an anomaly that occurred during a time of wastewater treatment plant deficiencies.

[redacted]

REPRESENTING THE HIGH MONTH FOR 1984

Operation	Production
Die Casting*	388 Tons/Day
Mold Cooling	388 Tons/Day
Casting Quench	307 Tons/Day
Casting Cleaning	252 Tons/Day
Melting Furnace Scrubber	156,000 SCFM

*Federal Effluent Guidelines Limitations (40 CFR Part 464) combine die casting, permanent molding, and semi-permanent molding processes together under one category - Die Casting.

Initial Alternate Limitations Rationale

Twenty percent separates the various levels from the Primary Limitations level. EPA generally agrees that a 10-20 percent fluctuation in production is within the range of normal variability, while changes in production "substantially higher" than this range could warrant consideration of alternate limitations.

10,866,500-lbs/mo.	Secondary/Alternate Limitations applicable for production falling below the 13,040,000 pounds levels for a projected month. Permit would need to be modified in this case.
13,040,000-lbs/mo.	Lower threshold level which would trigger alternate limitations.
16,300,000-lbs/mo.	Primary Limitations based on high month for the last twelve months.
19,560,000-lbs/mo.	Upper threshold level which would trigger alternate limitations.
*24,450,000-lbs/mo.	Secondary/Alternate Limitations applicable for production exceeding the 19,560,000 pounds level for a projected month.

EPA considers a 20% fluctuation to be within the normal range of variability. A 20% increase above the primary production level of 16.3×10^6 pounds aluminum would then be within this normal range which would serve as an upper threshold level. This would correspond to the level of 19.56×10^6 pounds of aluminum. Any production above this value could then be considered for alternate limits. Staff believe that a 25% increase above this threshold level would then be the basis for any secondary limits. This would correspond to the level of 24.45×10^6 pounds of aluminum. Therefore, a 20% swing above or below this secondary level of production would be included. A 20% increase above the 24.45×10^6 pounds level would then include the permittee's projected production level of 27.258×10^6 pounds of aluminum per month.

*Selected to be the basis for actual permit limitations since no significant differential existed after primary and secondary limitations were calculated.

Primary Effluent Limitations Calculation
(40 CFR Part 464)

Die Casting

Production = 388 T/D; Blowdown = 5.3 GPT

	D. Max. *	Mo. Ave.	Result. Multiplier	Effluent Limitations (lbs/day) D. Max.	Mo. Ave.
T. Copper	1.49	0.29	1.715×10^{-2}	0.026	0.005
T. Lead	0.24	0.2	1.715×10^{-2}	0.004	0.003
T. Zinc	2.67	0.53	1.715×10^{-2}	0.046	0.009
Oil and Grease	6.5	2.6	1.715×10^{-2}	0.111	0.045
T. Phenols	--	--	--	--	--
T. Suspended Solids	23.5	6.8	1.715×10^{-2}	0.403	0.117
T. Toxic Organics	--	--	--	--	--

Casting Cleaning

Production = 252 T/D; Blowdown = 24.0 G

	Result. Multiplier	Effluent Limitat D. Max.	(lbs/day) o. Ave.
T. Copper	5.0×10^{-2}	0.075	0.015
T. Lead	5.0×10^{-2}	0.012	0.01
T. Zinc	5.0×10^{-2}	0.135	0.027
Oil and Grease	5.0×10^{-2}	0.328	0.131
T. Phenols	--	--	--
T. Suspended Solids	5.0×10^{-2}	1.185	0.343
T. Toxic Organics	--	--	--

Mold Cooling

Production = 388 T/D; Blowdown = 25 GPT

	D. Max. *	Mo. Ave.	Result. Multiplier	Effluent Limitations (lbs/day) D. Max.	Mo. Ave.
T. Copper	1.49	0.29	8.09×10^{-2}	0.121	0.023
T. Lead	0.24	0.2	8.09×10^{-2}	0.019	0.016
T. Zinc	2.67	0.53	8.09×10^{-2}	0.216	0.043
Oil and Grease	6.5	2.6	8.09×10^{-2}	0.526	0.210
T. Phenols	--	--	--	--	--
T. Suspended Solids	23.5	6.8	8.09×10^{-2}	1.901	0.55
T. Toxic Organics	--	--	--	--	--

Casting Quench

Production = 307 T/D; Blowdown = 2.9 GPT

	Result. Multiplier	Effluent Limitat D. Max.	(lbs/day) o. Ave.
T. Copper	7.425×10^{-3}	0.011	0.002
T. Lead	7.425×10^{-3}	0.002	0.001
T. Zinc	7.425×10^{-3}	0.02	0.004
Oil and Grease	7.425×10^{-3}	0.048	0.019
T. Phenols	--	--	--
T. Suspended Solids	7.425×10^{-3}	0.174	0.05
T. Toxic Organics	--	--	--

T/D = Tons per day
GPT = Gallons per ton
* = Treatment effectiveness concentrations (mg/l) using "EPA and Confirmed DMR Data" for NonFerrous Foundries (see February 15, 1985, Not f Availability - Metal Molding and Castings Effluent Limitations Guidelines).

Primary Effluent Limitations Calculation (Cont'd.)

Melting Furnace Scrubber

Feed Rate = 156,000 SCFM; Blowdown = 0.47 gal. per 1000 SCF

	D. Max. *	Mo. Ave.	Result Multiplier	Effluent Limitations (lbs/day) D. Max.	Mo. Ave.
T. Copper	1.49	0.29	8.81×10^{-1}	1.312	0.255
T. Lead	0.24	0.2	8.81×10^{-1}	0.211	0.176
T. Zinc	2.67	0.53	8.81×10^{-1}	2.351	0.467
Oil and Grease	6.5	2.6	8.81×10^{-1}	5.725	2.29
T. Phenols	--	--	--	--	--
T. Suspended Solids	23.5	6.8	8.81×10^{-1}	20.692	5.988
T. Toxic Organics	--	--	--	--	--

Primary Limitations Totals

	Effluent Limitations (lbs/day) D. Max.	Mo. Ave.
T. Copper	1.545	0.3
T. Lead	0.248	0.206
T. Zinc	2.768	0.55
Oil and Grease	6.736	2.694
T. Phenols	--	--
T. Suspended Solids	24.355	7.048
T. Toxic Organics	--	--

T/D = Tons per day
GPT = Gallons per ton
* = Treatment effectiveness concentrations (mg/l) using "EPA and Confirmed DMR Data" for NonFerrous Foundries (see February 15, 1985, Notice of Availability - Metal Molding and Castings Effluent Limitations Guidelines).

Secondary Effluent Limitations Calculation

Die Casting

Production = 582 T/D; Blowdown = 5.3 GPT

	D. Max.	*	Mo. Ave.	Result. Multiplier	Effluent Limitations (lbs/day) D. Max.	Mo. Ave.
T. Copper	1.49		0.29	2.573×10^{-2}	0.038	0.007
T. Lead	0.24		0.2	2.573×10^{-2}	0.006	0.005
T. Zinc	2.67		0.53	2.573×10^{-2}	0.069	0.014
Oil and Grease	6.5		2.6	2.573×10^{-2}	0.167	0.067
T. Phenols	--		--	--	--	--
T. Suspended Solids	23.5		6.8	2.573×10^{-2}	0.605	0.175
T. Toxic Organics	--		--	--	--	--

Casting Cleaning

Production = 378.4 T/D; Blowdown = 24 GP

Result. Multiplier	Effluent Limitati D. Max.	(lbs/day) . Ave.
7.572×10^{-2}	0.113	.022
7.572×10^{-2}	0.018	.015
7.572×10^{-2}	0.202	.040
7.572×10^{-2}	0.492	.197
--	--	--
7.572×10^{-2}	1.780	.515
--	--	--

Mold Cooling

Production = 582 T/D; Blowdown = 25 GPT

	D. Max.	*	Mo. Ave.	Result. Multiplier	Effluent Limitations (lbs/day) D. Max.	Mo. Ave.
T. Copper	1.49		0.29	12.135×10^{-2}	0.181	0.035
T. Lead	0.24		0.2	12.135×10^{-2}	0.029	0.024
T. Zinc	2.67		0.53	12.135×10^{-2}	0.324	0.064
Oil and Grease	6.5		2.6	12.135×10^{-2}	0.798	0.316
T. Phenols	--		--	--	--	--
T. Suspended Solids	23.5		6.8	12.135×10^{-2}	2.852	0.825
T. Toxic Organics	--		--	--	--	--

Casting Quench

Production = 460 T/D; Blowdown = 2.9 GPT

Result. Multiplier	Effluent Limitati D. Max.	(lbs/day) . Ave.
1.112×10^{-2}	0.017	.003
1.112×10^{-2}	0.003	.002
1.112×10^{-2}	0.030	.006
1.112×10^{-2}	0.072	.029
--	--	--
1.112×10^{-2}	0.261	.076
--	--	--

T/D = Tons per day
GPT = Gallons per ton
* = Treatment effectiveness concentrations (mg/l) using "EPA and Confirmed DMR Data" for NonFerrous Foundries (see February 15, 1985, Noti f Availability - Metal Molding and Castings Effluent Limitations Guidelines).

Secondary Effluent Limitations Calculation (Cont'd.)

Melting Furnace Scrubber

Feed Rate = 156,000 SCFM; Blowdown = 0.47 gal. per 1000 SCF

	D. Max. *	Mo. Ave.	Result Multiplier	Effluent Limitations (lbs/day) D. Max.	Mo. Ave.
T. Copper	1.49	0.29	8.81×10^{-1}	1.312	0.255
T. Lead	0.24	0.2	8.81×10^{-1}	0.211	0.176
T. Zinc	2.67	0.53	8.81×10^{-1}	2.351	0.467
Oil and Grease	6.5	2.6	8.81×10^{-1}	5.723	2.289
T. Phenols	--	--	--	--	--
T. Suspended Solids	23.5	6.8	8.81×10^{-1}	20.692	5.988
T. Toxic Organics	--	--	--	--	--

Secondary Limitations Totals

	Effluent Limitations (lbs/day) D. Max.	Mo. Ave.
T. Copper	1.661	0.322
T. Lead	0.267	0.222
T. Zinc	2.976	0.591
Oil and Grease	7.243	2.898
T. Phenols	--	--
T. Suspended Solids	26.19	7.597
T. Toxic Organics	--	--

T/D = Tons per day
GPT = Gallons per ton
* = Treatment effectiveness concentrations (mg/l) using "EPA and Confirmed DMR Data" for NonFerrous Foundries (see February 15, 1985, Notice of Availability - Metal Molding and Castings Effluent Limitations Guidelines).

METAL MOLDING AND CASTING
FLOW RATES AND RECYCLE RATES

Subcategory	Process Segment	Flows - GPT (1) Applied	Blowdown	Recycle
Aluminum	Casting Cleaning	480	24	95
	Casting Quench	145	2.9	98
	Die Casting	106	5.3	95
	Dust Collection Scrubber	1.78*	0.036*	98
	Grinding Scrubber	0.063*	0	100
	Investment Casting	20,800	3,120	85
	Melting Furnace Scrubber	11.7*	0.47*	96
	Molding Cooling	506	25	95
Copper	Casting Quench	478	9.6	98
	Direct Chill Casting	3,130	157	95
	Dust Collection Scrubber	4.29*	0.086*	98
	Grinding Scrubber	0.111*	0	100
	Investment Casting	764	115	85
	Melting Furnace Scrubber	7.04*	0.28*	96
	Mold Cooling	5,530	277	95
Ferrous	Casting Cleaning	213	10.7	95
	Casting Quench	571	11.4	98
	Dust Collection Scrubber	3.0*	0.09*	97
	Grinding Scrubber	3.17*	0	100
	Investment Casting	300	45(3)	85(3)
	Melting Furnace Scrubber	13.7*	0.55*	96
	Mold Cooling	707	35.4	95
	Slag Quench	727	43.6	94
	Wet Sand Reclamation	895(2)	179(2)	80
Magnesium	Casting Quench	535	10.7	98
	Dust Collection Scrubber	0.275*	0.0055*	98
	Grinding Scrubber	0.275*	0	100
Zinc	Casting Quench	533	10.7	98
	Die Casting	109	5.5	95
	Melting Furnace Scrubber	0.385*	0.0154*	96
	Mold Cooling	4,000	200	95

*-gallons per 1000 SCF
(Obtained from February 15, 1985, Notice of Availability)

Post Public Notice Addendum - September 1985

As a result of comments received from the permittee during the 30-day public notice period, the following responses and/or changes are being made in the NPDES permit.

The appropriate section of the ISPCB has been informed of the request for the reclassification of a portion of Pleasant Run Creek and the Bailey Branch to limited use. If and when reclassification to limited use is approved by the appropriate agencies of the ISPCB and EPA, the permittee may at that time request a permit modification to consider the needed changes, if any, in effluent limitations and/or monitoring requirements of the permit. As you may or may not be aware of, limited use streams must still meet certain minimum water quality standard water quality standards (Refer to ISPCB Regulation 330 IAC 1-1-6) so that the point of application of these requirements would remain at the present outfall location(s) and not at some location downstream (point F in Appendix I of supporting data). Additional time for submittal of supplemental data supporting the permittee's request for the limited use classification is not being granted. Any supporting data should have been submitted within the 30-day comment period. However, all pertinent data will be evaluated by the appropriate agencies in determining whether or not the receiving stream meets the requirements for the limited use designation.

As a result of comments received concerning the designation of the new stormwater retention lagoon outfall as 001, it has been decided for accuracy and future reference that all references to outfall 001 be changed to refer instead to outfall 003 in the permit. Outfall 001 shall remain in the record as the discharge point from the original stormwater retention lagoon which is no longer utilized.

Monitoring frequency requirements for flow, TSS, Oil and Grease, pH and PCB's are not out of line with requirements for discharges (Industrial and Municipal) having similar characteristics and/or volume. No changes are proposed at this time for any of the monitoring frequencies in the permit. However, if after a period of time the permittee has shown that the requirements in the permit have been consistently met, a request for modification to alter specific conditions (i.e., relaxed monitoring frequency) may be submitted to the ISPCB.

Staff disagrees with your request to require only 3-month monitoring for the metals Zinc and Lead at outfall 002. Since the Proposed Metal Molding and Casting Point Source Effluent Limitations Guidelines include limitations for these two parameters, staff is required to place limitations in the permit based either on reported production quantities or water quality considerations, whichever is more stringent. As mentioned in the previous paragraph, permitted parameters and/or conditions may be modified (i.e,, relaxed or deleted) if permit requirements and/or conditions have consistently been met. However, by the case of

allowing a relaxation of monitoring frequency but not total deletion of those regulated parameters and/or conditions. The parameter copper, contrary to your belief, is listed in the guidelines for the Aluminum Casting Subcategory and shall remain in the permit as proposed.

It must be emphasized again that all changes regarding requirements and/or conditions based upon the possible reclassification of the receiving stream will have to wait until the appropriate time (i.e., when reclassification is finalized) for consideration.

Several comments questioned the use of drinking water standards in establishing limitations. Especially since "the nearest potable water supply intake is north of Bedford, In., on Salt Creek." However, this staff is also charged with the responsibility to protect wildlife and livestock from toxic effects - the limitation of 0.05 mg/L for lead is probably the best we know for that purpose. Also, using EPA toxicity formulas based upon water hardness, an acute aquatic toxicity value of 0.058 mg/l is obtained after applying a safety factor of 1/10 as specified in ISPCB Regulation 330 IAC 1-1-6(b) for toxic substances. This figure is almost identical to the figure listed by the U.S.P.H.S.

No relaxation of the T. phenols limitations is proposed based on the possible reclassification to limited use. Even with the limited use designation no relaxation for toxic pollutants is permissible.

Comments concerning the $TBOD_5$ request for 3-months monitoring and changes in the wording of Toxic Organic Pollutant Monitoring is not possible without having had public noticed the permit with this language in it. As mentioned previously, permit modification is always an option after a period of time in which consistent compliance has been observed for those requirements and/or conditions requested to be changed.

As a result of comments received from EPA, effluent limitations for total residual chlorine (TRC) have been deleted and 6-month monitoring is required. As a result of these comments, staff felt it was appropriate to reduce the sampling frequency to twice (2) monthly. (See EPA comment section concerning TRC.)

The request for an increase in time from 90 days to 180 days for submittal of the Toxic Organic Management Plan is not being granted. Submittal of the Plan after 90 days from the issuance date of the permit does not necessarily need to follow TTO monitoring in order to meet the requirements of the Toxic Organic Pollutant Management Plan.

Since it was unavoidable that the permittee did not have an opportunity to review the draft permit and fact sheet for accuracy prior to the 30-day public notice period, several items requiring clarification and/or correction should be noted as follows:

1. Under the heading of Description of Existing Discharge, page 6 of the Fact Sheet (F.S.), the description of the industrial classification should be revised to reflect more accurately the plant operations. This paragraph should read:

"Operations from this facility are listed under SIC Code 3361 for an aluminum foundry for the production of various types of transportation castings, including transmission castings, pistons, intake manifolds, and engine blocks, utilizing aluminum die castings, permanent and semipermanent molding processes."

2. The leading two paragraphs under the heading Intake Water and Wastewater Treatment description, page 6 of the F.S., also requires clarification to describe accurately the plant's operations. Most significantly, an implication is made that all stormwater collected from the site is contaminated and that it originates from the entire site. The paragraphs should read:

"The City of Bedford provides the applicant with water which is used as process make-up and sanitary water. Stormwater runoff is collected from the improved plant properties and recycled as required for process make-up water. This stormwater comprises a significant share of make-up water for process operations. (See the attached 1983 water balance diagram for Central Foundry.)"

"Treated wastewater originating from aluminum die casting, permanent and semipermanent molding processes, and stormwater runoff are discharged through outfall 002. The process wastewater specifically arises from die casting, die lubing, cooling of dies and castings, air scrubbers, casting cleaning, and miscellaneous sources such as the cooling tower and boiler blow down. Sanitary wastewater discharges to the city sewer for treatment at the publicly owned treatment works (POTW)."

The last paragraph in this section, page 8 of the F.S., is also inaccurate. It should be completely replaced with:

"The existing wastewater treatment system has a design capacity of 3.0 mgd and a significant portion of its treated effluent is recycled to manufacturing as process water. Preliminary treatment consists of free oil separation and solids settling in one pair of units followed by flow equalization. The next stage of treatment consists of activated sludge treatment followed by sedimentation and rapid sand filtration. Excess sludges from the activated sludge units are aerobically digested in a pair of separate units. Solids and oil separated in preliminary treatment are processed to recover hydraulic fluid. The non-recoverable residue is either processed in the activated sludge-aerobic digestion units or directly dewatered in the filter press along with the aerobically digested sludge. The dewatered

approved landfill. Final treatment of the rapid sand filter effluent is accomplished by activated carbon sorption prior to discharge."

3. Under the Receiving Stream section of the F.S., page 9, it states that outfalls 001 and 002 (proposed 003 and 002) combine in an unnamed ditch prior to their confluence with Bailey Branch of Pleasant Run Creek. This is not the case. Outfall 002 joins Bailey Branch upstream of the point which outfall 001 (proposed 003) joins. The revised topographical map, page 5 of the F.S., is attached for the record.

   Attached is also a revised diagram concerning the Biological Wastewater Treatment System which was submitted incompletely with the renewal application.

   The diagram required the following flow connections to be complete:

   (1) sludge from the hydraulic fluid separator may be pumped to the digesters, and

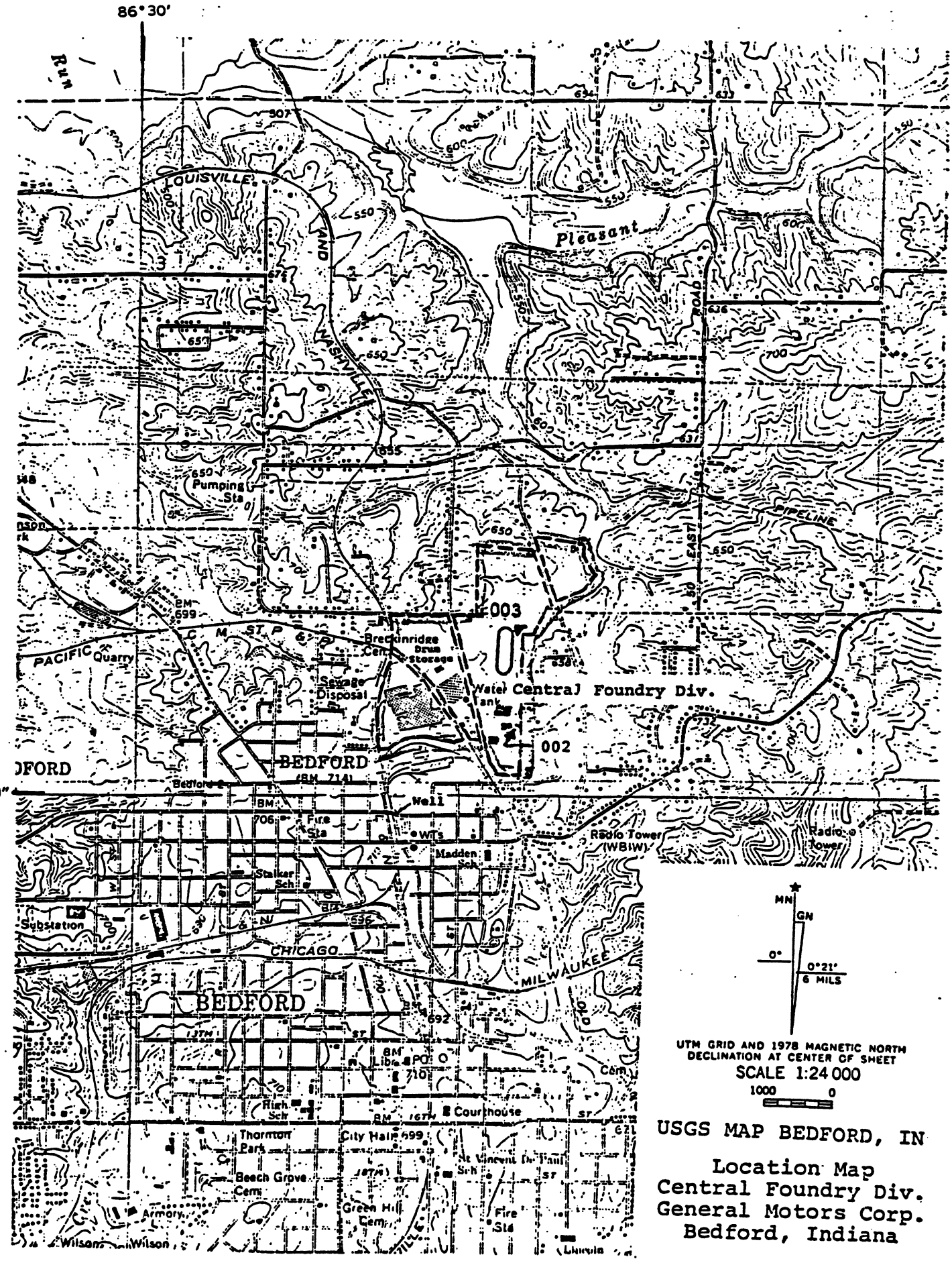
   (2) stormwater may be pumped directly from the retention lagoon directly to carbon adsorption.

As a result of comments received from EPA, Region V, on the draft permit, the two following requirements are being inserted into the permit for outfall 002.

1. The total residual chlorine (TRC) limitations are being deleted. Instead, monitoring for a period of six (6) months (which also includes a reduction in monitoring frequency to a twice monthly sample) is required since detectable levels of TRC should not be present in the effluent. If TRC is present in detectable amounts during this period then effluent limitations will be placed on the discharge at this time, if appropriate.

2. A daily average limitation is being required based on the chronic toxicity effects of zinc. Using the calculated mass limitations from the effluent guidelines, back calculation utilizing the permittee's average flow provides a concentration value of 0.2 mg/l for daily average. This value is also fairly representative of chronic toxicity values for those species typically found in the receiving stream and shall be inserted into the permit as the daily average limitation.

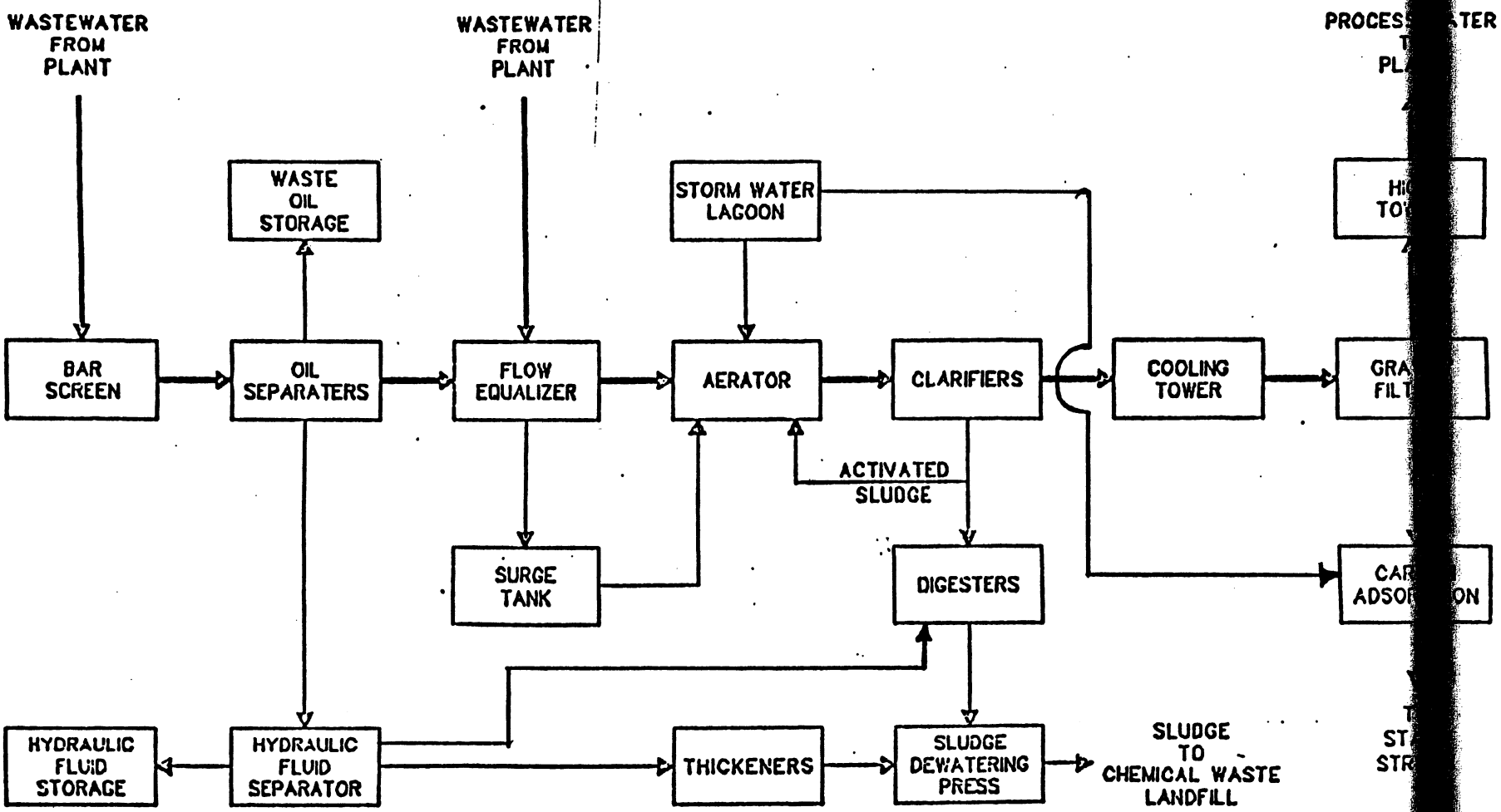
FS/General Motors PER3
(jb 9/19/85)



USGS MAP BEDFORD, IN

Location Map
Central Foundry Div.
General Motors Corp.
Bedford, Indiana

BIOLOGICAL WASTEWATER TREATMENT SYSTE



MAJOR

NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM (NPDES) PERMIT PROGRAM

PUBLIC NOTICE

Issuance of a NPDES Permit to Discharge into Waters of the State

Indiana Stream Pollution Control Board
1330 West Michigan Street
Indianapolis, IN 46206
317/633-0795

Public Notice Number: 5I-5056 RI

Public Notice Issued On: Oct. 2, 1985

Permit No.: IN 0003573

Name and Address of Permittee:

General Motors Corporation
Central Foundry Division
Bedford Plant
P.O. Box 271
Bedford, IN 47421

Name and Address of Facility Where Discharge Occurs:

General Motors Corporation
Central Foundry Division
Bedford Plant
North Jackson Street
Bedford, IN 47421

I. Permit Information

You are hereby notified that the Technical Secretary of the Indiana Stream Pollution Control Board issued a NPDES permit on September 23, 1985 to the above-named applicant to discharge wastewaters into the Bailey Branch of Pleasant Run Creek in Lawrence County, Indiana. The permittee operates a facility that utilizes aluminum die casting and molding processes. Plant operations result in an average discharge of 0.353 million gallons per day of treated process and storm runoff water. The permit authorizes the discharge for the following pollutants/parameters: ammonia (as N), pH, oil and grease, $TBOD_5$, total toxic organics, TSS, T. Copper, T. Lead, T. Zinc, T. Phenols, T. Residual Chlorine and PCB's, pursuant to applicable State and Federal law. The above-named State waters, into which the discharge is made, are classified for partial-body contact recreation and aquatic life in accordance with State water quality standards.

II. Appeal Procedures

Within fifteen (15) days after the date of publication of this notice, any person aggrieved by the issuance of the above-referenced permit may appeal in writing to the Indiana Stream Pollution Control Board for an adjudicatory hearing on the question of whether the permit has been issued in accordance with applicable law.

(1) state the name and address of the person making the request;
(2) identify the interest of the person making the request;
(3) identify any persons represented by the person making the request;
(4) state with particularity the reasons for the request;
(5) state with particularity the issues proposed for consideration at the hearing; and
(6) identify the permit terms and conditions which, in the judgment of the person making the request, would be appropriate to satisfy the requirements of the law governing permits of the type granted or denied by the Technical Secretary's action.

Any such request shall be mailed or delivered to:

Mr. Earl A. Bohner, Technical Secretary
Indiana Stream Pollution Control Board
1330 West Michigan Street
Indianapolis, IN 46206

III. General Information

Copies of the issued NPDES permit, the permit application, and other related documents are on file and may be inspected in Room 334, Indiana State Board of Health, 1330 West Michigan Street, Indianapolis, Indiana, at any time between 9:00 a.m., and 4:00 p.m., Monday through Friday. Copies of this Public Notice and the proposed permit are available at the Indiana State Board of Health. These documents may be copied at a cost of 15¢ per page. Please bring the foregoing to the attention of persons whom you know would be interested in this matter.

MAY 25, 2001

APPENDIX B.6

NORTH MAKE AND SOUTH MAKE SERVICE TUNNELS

APPENDIX B.7

ISBH LETTER DATED JANUARY 16, 1973

CC: HERR, JARRARD, PEARSON, ESAREY, SCHNEIDER, & ILLUMINATI

STATE of INDIANA

INDIANAPOLIS 46206

1330 West Michigan Street
633-4420

STREAM POLLUTION CONTROL BOARD

January 16, 1973

Mr. R. V. Stumph, General Superintendent
General Motors Corporation
Central Foundries Division
Bedford, Indiana 47421

Dear Mr. Stumph:

Re: Wastewater Treatment
Central Foundries Division

You are hereby notified that the Stream Pollution Control Board of the State of Indiana has, this 16th day of January, 1973, approved plans for a waste treatment facility to be located at Central Foundries Division, Bedford.

The company proposes a complete separation of storm and process water flows from the manufacturing plant area. The storm sewer will flow directly to the fourth pond of the existing five pond system south of the plant while the process water will flow to a new treatment facility prior to discharge to the third pond of that system. Ponds one and two will be drained and filled.

The new wastewater treatment system will include a 280-gallon diversion chamber controlling the flow to either or both of two identical clarifiers of 40-foot diameter by 11-foot SWD, Eimco Corporation Type C2T (or equal) clarithickeners. Each clarithickener can take the total 450-gpm maximum flow and provide four hours of detention with a surface settling rate of 520 gallons per day per square foot or can be operated in parallel to provide twice the detention time. Each clarithickener has a sludge storage and thickening capacity of 2,100 gallons which will contain an anticipated three days of storage at a 700-gallon per day accumulation rate. The thickened sludge will be essentially hydraulic oil in combination with colloidal graphite. Blowdown from the sludge compartment of the clarithickeners will have density monitoring as it is transferred to a 19,700-gallon hydraulic oil storage tank that will provide an anticipated 28 days of storage capacity at a maximum blowdown rate of 700 gallons per day. Hydraulic oil will be heated and centrifuged to remove gross solids with oil fractions returned to the hydraulic storage tank.

The plans were approved with the following conditions:

1. That additional wastewater treatment facilities will be provided if the proposed facilities fail to provide adequate treatment.

2. That the Board will be notified of the completion of these facilities prior to the start of their operation.

3. That a certified wastewater treatment operator will be in responsible charge of the operation.

WP

4. That the company shall submit monthly reports of the effluent from these facilities covering daily determinations of flow and pH and once per week determinations of oil and suspended solids.

5. That sludges shall be disposed of in a manner that is approved by the Board.

The plans were prepared by Environmental Consultants, Inc., Clarksville, and submitted for consideration on December 7, 1972.

Very truly yours,

Oral H. Hert

Oral H. Hert
Technical Secretary

I. W. Approval No. 825
CLGough/lbw
cc: Lawrence County Health Department
Environmental Consultants, Inc.

APPENDIX B.8

ISBH LETTER DATED JANUARY 17, 1973

STATE OF INDIANA

INDIANAPOLIS

STATE BOARD OF HEALTH

Address Reply to:
Indiana State Board of Health
1330 West Michigan Street
Indianapolis, IN 46206

January 17, 1973

Mr. R. V. Stumph, General Superintendent
General Motors Corporation
Central Foundries Division
Bedford, Indiana 47421

Dear Mr. Stumph:

Re: Wastewater Treatment
Central Foundries Division

You are hereby notified that the State Health Commissioner of the State of Indiana has, this 17th day of January, 1973, approved plans for a waste treatment facility to be located at Central Foundries Division, Bedford.

The company proposes a complete separation of storm and process water flows from the manufacturing plant area. The storm sewer will flow directly to the fourth pond of the existing five pond system south of the plant while the process water will flow to a new treatment facility prior to discharge to the third pond of that system. Ponds one and two will be drained and filled.

The new wastewater treatment system will include a 280-gallon diversion chamber controlling the flow to either or both oftwo identical clarifiers of 40-foot diameter by 11-foot SWD, Eimco Corporation Type C2T (or equal) clarithickeners. Each clarithickener can take the total 450-gpm maximum flow and provide four hours of detention with a surface settling rate of 520 gallons per day per square foot or can be operated in parallel to provide twice the detention time. Each clarithickener has a sludge storage and thickening capacity of 2,100 gallons which will contain an anticipated three days of storage at a 700-gallon per day accumulation rate. The thickened sludge will be essentially hydraulic oil in combination with colloidal graphite. Blowdown from the sludge compartment of the clarithickeners will have density monitoring as it is transferred to a 19,700-gallon hydraulic oil storage tank that will provide an anticipated 28 days of storage capacity at a maximum blowdown rate of 700 gallons per day. Hydraulic oil will be heated and centrifuged to remove gross solids with oil fractions returned to the hydraulic storage tank.

The plans were approved with the following conditions:

1. That additional wastewater treatment facilities will be provided if the proposed facilities fail to provide adequate treatment.

2. That the Board will be notified of the completion of these facilities prior to the start of their operation.

Mr. R. V. Stumph

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3. That a certified wastewater treatment operator will be in responsible charge of the operation.

4. That the company shall submit monthly reports of the effluent from these facilities covering daily determinations of flow and pH and once per week determinations of oil and suspended solids.

5. That sludges shall be disposed of in a manner that is approved by the Board.

The plans were prepared by Environmental Consultants, Inc., Clarksville, and submitted for consideration on December 7, 1972.

Sincerely,

A. C. OFFUTT, M.D.
STATE HEALTH COMMISSIONER
INDIANA STATE BOARD OF HEALTH

I. W. Approval No. 825
cc: Lawrence County Health Department
Environmental Consultants, Inc.